

Public Opinion Quarterly

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- Crusading Journalism: Changing Public Attitudes and Policy-Making
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- THE POLLS: Medical Care in the United States
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NEWS AND NOTES • BOOK REVIEWS

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Crusading Journalism: Changing Public Attitudes and Policy-Making Agendas

**DONNA R. LEFF, DAVID L. PROTESS
AND STEPHEN C. BROOKS**

INVESTIGATIVE reporting is a costly and trendy enterprise used by publishers and broadcasters to build their audiences. Researchers studying mass media influence on the salience of issues before the public—their “agenda-setting” function—seldom have studied this controversial form of reporting. Nonetheless, agenda-setting research is growing, and with it the question of the strength of the causal relationship between media content and public opinion. The methodologies and the findings vary from study to study, with the agenda-setting effects demonstrated both in broadcast and print media. (See literature review by Roberts and Bachen, 1981.)

Abstract This is the third in a series of studies on the agenda-setting effects of news media investigations of social issues. Researchers had access to a local five-part television investigation of repeatedly brutal police officers before it was broadcast in the February 1983 sweeps period. Using random-digit-dialing to select a sample of Chicago area viewers, researchers surveyed 428 members of the general public on their attitudes toward various social issues, including the conduct of city police officers. We hypothesized that respondents exposed to the series would change their responses to questions about police brutality, which they did in statistically significant numbers. A similar survey of so-called elites, policy makers or persons with a prior interest in police behavior, also was undertaken before and repeated after the series was broadcast. Although no statistically significant change in elite opinions of police behavior occurred, small but statistically significant changes in knowledge of specific police acts were recorded. Researchers discuss the findings of study three and speculate about the different agenda-setting effects of the three series.

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Researchers also have done little to assess the influence of the media on the policy agendas of decision makers (Downs, 1972; Molotch, 1974; and Blanchard, 1974). Studies specifying the connections between the media, public opinion, and policy information tend to be theoretical (Molotch et al., 1982), normative (Paletz and Entman, 1981; Regier, 1930), or anecdotal (Bernstein and Woodward, 1974; Crouse, 1973; Salisbury, 1980).

This study is the third in a series to identify agenda-setting effects of investigative reporting on both the general public and policy makers.¹ All three studies use a pretest, posttest experimental or quasi-experimental design that takes advantage of researchers' prior knowledge of the content of specific investigative reports.

The first in the series (Cook et al., 1983) found that a nationally televised investigative news report on fraud and abuse in the federally funded home health care program had significant effects on both kinds of agendas. The study found that home health-care-related issues (and not unrelated issues) became significantly more important to citizens and policy makers exposed to the television investigative report than to nonviewers. Yet actual policy changes after the televised report resulted more from direct pressure for "reform" by the journalists themselves than from demands by the general public or political constituencies.

The second study (Protess et al., 1985) used a quasi-experimental design to measure the agenda-setting effects of a Chicago *Sun-Times* newspaper investigative series disclosing government improprieties in the reporting and handling of cases of rape against Chicago area women. Again, researchers used a design better suited to test causal hypotheses than methodologies used in more traditional agenda-setting research (Cook and Campbell, 1979), including cross-sectional (McCombs and Shaw, 1972; McLeod, et al., 1974; Erbring et al., 1980), or panel study designs (Tipton et al., 1975; Shaw and McCombs, 1977; MacKuen, 1981). While the first study was of a single nationally televised report using home health care as its topic, the second study was of a local newspaper series on the topic of rape. The third study, reported here, also was of a local multipart series, but the topic was police brutality and the medium was broadcast rather than print.

The agenda-setting effects of the rape study on the general public and on policy makers was more limited than the first study, in part because the pretest disclosed an already high level of awareness and concern about crime among all groups. The most striking result was a

¹ The studies are being conducted by an interdisciplinary research team at the Center for Urban Affairs and Policy Research, Northwestern University.

sharp increase in the number, length, and prominence of stories about rape in the *Sun-Times* itself—that is, the largest measurable effect was on the medium rather than on its audience. Journalists and government officials did not carefully orchestrate a policy response, as in the home-health-care study. However, as in the first study, policy-making effects were highly “symbolic:” acts “dramatic in outline and empty of realistic detail,” rather than “substantive” in nature (Edelman, 1964: 9).²

The current study, an analysis of the agenda-setting effects of a five-part television investigative series about repeatedly brutal Chicago police officers, found that the reports had a significant impact on the general public who viewed or heard about them. Response of policy-making “elites” surveyed was less conclusive. Significant changes could be detected in the elites’ view of public opinion about police brutality, but they did not increase their own concern about police brutality as a social problem. The series did, however, have an educational impact on exposed elites according to their responses to questions about specific information in the televised reports. The police brutality series resulted also in major policy changes within the Chicago Police Department, in contrast to the largely symbolic gestures that followed the home health care and rape reports.

The first study found greater effects while using a purer experimental design than the second. We therefore were eager to employ the latter methodology in an additional study to determine whether methodological differences accounted for differences in agenda-setting effects in the two studies. We also wanted to study more closely the often overlooked policy effects of investigative reporting and to understand more about the linkages between public opinion, policy makers, and policy formation. This article first will examine the attitudinal impact of the television series on police brutality on the general public and on policy elites. Next, we trace the effects of the series on public policy in Chicago, specifically looking at the police department’s own response to disclosures about its shortcomings. We discuss the agenda-setting effect of the series on a heated political campaign in the city, and finally, we analyze the different findings of the three studies and try to explain them.

² Although some symbolic acts may appear substantive, here we have used the term *symbolic* to describe policy changes that either are purely rhetorical or that would have occurred without media stimulus. Thus, when a public official responds to a media expose by convening a legislative hearing or by announcing as news previously approved legislation, we call those acts symbolic. Similarly, a statement promising reforms that never are implemented is termed symbolic. Conversely, “substantive” reforms are actual regulatory, legislative, or administrative changes that occur after an investigative story is presented.

Research Design

The pretest, posttest experimental design is highly appropriate, but not traditionally utilized, in research involving nonlaboratory studies of media agenda setting. One significant obstacle to its application is inherent in the definition of news. Even media personnel are unaware of specific stories they will cover in the future, making pretesting and experimental or quasi-experimental manipulation difficult or impossible.

In this study, however, two factors made it possible for researchers to apply a quasi-experimental research design. The local NBC affiliate, WMAQ-TV (Channel 5), spent six months investigating allegations of police brutality. While the high drama in the broadcast of the allegations may have made the stories seem immediate, in fact the lengthy preparation gave researchers ample time to obtain preseries measurement of public attitudes toward this problem. Further, the policy relevance of most investigative reporting, such as the police brutality series, makes such stories particularly appropriate for studying their effects on both citizen and policy-making agendas.

The second factor in this study was the close cooperation between Channel 5 reporters and our researchers. In the months before the series aired, researchers were informed continually of the developing investigative findings. Questions could be tailored carefully to the content of the television reports, and issues unrelated to its subject matter could be explored as controls.

The series, "Beating Justice," was broadcast on five successive nights beginning on February 7, 1983—a ratings sweepstakes period coinciding with Chicago's mayoral primary election campaign.³ The reports included dramatic footage of police wagons used as weapons to bounce handcuffed victims during harrowing rides to jail and interviews with victims maimed by police. Reporters reviewed all lawsuits filed against police in federal courts in Chicago in the previous five years and found 107 officers named more than once. Despite procedures developed by the department in response to earlier investigative reports, officers found by the department to have used excessive force were given only minor discipline and no psychiatric counseling. The

³ The Feb. 22, 1983 primary election was a bitterly fought contest between the Democratic party's endorsed candidate, incumbent Mayor Jane Byrne; State's Attorney Richard M. Daley, son of Chicago's late, long-time mayor (and the sentimental favorite of many old-time party regulars); and black Congressman Harold Washington. Washington defeated his two white opponents, in a primary victory normally tantamount to election in Democratic-ruled Chicago, but in this case the victory led to an even more bitter and racially divisive general election campaign in April against a previously little-known Republican.

series included a statistical review of brutality cases against police describing how the department systematically whitewashed brutality charges. Reporters revealed that millions of taxpayer dollars were being spent to compensate victims of police brutality who successfully sued the department. The cameras graphically depicted—although reporters never explicitly stated—that most police brutality victims were nonwhite. Finally, reporters conducted a live interview with the superintendent of police, who by the conclusion of the series had become an issue in the city's mayoral primary that would be held February 22.

Respondents surveyed about offending police officers and the department's lax handling of complaints against them included a random sample of the general public and a purposive sample of policy makers. The methods used in drawing the sample and analyzing data are described below.

GENERAL PUBLIC

Four hundred twenty-eight respondents from the Chicago Metropolitan area were contacted from a pool of potential interviewees using random-digit-dialing techniques. Telephone numbers were generated from listings taken from area directories. The last digit of each number was replaced with a random digit to insure that unlisted telephone numbers were included in the sample. The 30 percent who refused to be interviewed were found to be similar to respondents in sex, age, education, and area of residence.⁴

The sample was stratified according to television viewing habits into watchers of Channel 5 (253 respondents), and watchers of other evening newscasts or nonwatchers of any television news (171). One week after the series was broadcast, researchers recontacted the entire sample. As indicated in Table 1, 279 persons agreed to be reinterviewed, and they comprise the public sample in this study. Those respondents reflected attitudes on the pretest about police brutality that were similar to those on the pretest of persons not reinterviewed, although minorities and the less well-educated were less represented in the reinterviewed group.⁵

⁴ About 30 percent of persons "eligible" refused to be interviewed. Eligibles were English-speaking Chicago area residents over the age of 18.

⁵ Conducting a difference of means *t*-test between those reinterviewed and those not reinterviewed produced a statistically significant difference between the two groups at the .05 level on 7 of 20 items. The seven included two questions on government corruption, the questions on police bribery and traffic enforcement, and the ratings of police, garbage, and fire services.

We found a difference in the two response groups in race and education (consistent with survey researchers' observations on the mobility of panels of interviewees). The reinterviewed group contained a greater proportion of whites to nonwhites and had a higher education level. Analysis of attitudes indicates, however, that the groups tend to differ little in their initial attitudes about police brutality.

Table 1. Quasi-Experimental Design Distribution of Public Respondents

<i>Respondent Groupings</i>	<i>Pretest</i>	<i>Posttest</i>
Channel 5 watchers/nonwatchers		
Treatment (watchers)	253 (59.7%)	171 (61.3%)
Control (nonwatchers)	171 (40.3%)	108 (38.7%)
Total	424 (100.0%)	279 (100.0%)
Series aware/nonaware		
Treatment (series aware)	NA	163 (58.8%)
Control (not aware)	NA	114 (41.2%)
Total	NA	277 (100.0%)

At the conclusion of the posttest interview, respondents were asked whether they had "seen, read or heard anything about news media investigations of police brutality in Chicago?" This screening question was used to include in the exposed group persons who may not have seen the series under study but who heard about it in some other way, such as in reports picked up by other media, in conversations with friends, or in advertisements promoting the Channel 5 series. This question also corrected for persons who said they were regular viewers of Channel 5 news but who did not see the series on police brutality. Those responding "yes" to the question were considered "treatment" and those who answered "no" were considered "control" group members. Table 1 shows the distribution of respondents in this analysis. It is important to emphasize that respondents in both analyses are from the same overall sample. It is only the quasiexperimental definition of "treatment" and "control" that changes.

In the pre- and posttest interviews, respondents were asked about a variety of topics including police brutality. Researchers deliberately embedded questions about the police among questions about other social issues to avoid sensitizing respondents to the issues. Of the 24 separate items in the questionnaire, 11 were related to law enforcement issues and 6 to police brutality. We hypothesized that change would occur in the "treatment" group on questions about police brutality, while responses to other questions would remain consistent from pre- to posttest. We expected the "control" group responses to remain consistent on all questions.

We asked respondents to rate the importance of brutality as a problem and to assess the quality of the Chicago Police Department. Further, respondents were asked to agree or disagree with statements about police brutality occurring more frequently against nonwhites, about the police department's lax discipline of brutal officers, and about the need for adequate compensation of victims of police brutality. These questions addressed specific points made in the television

report. The subject areas of questions could be divided into four categories: (1) measurement of attitudes and agendas, (2) measurement of knowledge (specific facts learned from the reports), (3) measurement of emotions, and (4) measurement of changes in behavior. Thus, we hypothesized that in posttest interviews, treatment group members would consider police brutality a more important issue, would increase their knowledge of police brutality to incorporate facts revealed in the series, and would change their attitudes, feelings, and actions about the problem.

POLICY MAKERS

A purposive sample of "policy elites" was selected for its interest and potential influence on law enforcement policy makers. The 35 persons surveyed included several suburban police chiefs, state legislators, members of the Chicago city council, and members of a citizens advisory police group. Interviews were conducted by telephone and all 35 were reinterviewed after the police brutality series. In previous studies, researchers made no attempt to establish an elite group of nonexposed ("control") respondents. We expected that persons with a great deal of interest in the topic of investigative reports almost certainly would hear of them, even if they failed to read or view the specific stories. Indeed in the rape study, only one elite had neither read nor heard about the *Sun-Times* reports. In this third study, however, about a third of respondents could be grouped as "controls" who were unaware of the Channel 5 reports. Separate analyses were conducted for the exposed and unexposed groups of elites.⁶

The policy makers were asked a series of pretest and posttest questions that were identical to those in the survey of the general public. Additionally, however, they were asked to estimate the public's views on the issues in question. They also were asked a set of questions about their policy-making activity related to police brutality. After the series, researchers tracked policy changes that might be attributable to the Channel 5 series by interviewing policy makers and by content analyzing local media.

Findings

GENERAL PUBLIC

In examining public attitudes before and after the police brutality series, we wanted to learn whether attitudes toward police brutality

⁶ It has been suggested that researchers create a sensitivity control group of policy makers in a future study—a group not subject to the pretest, to determine whether pretest interviewing of elites sensitizes them to the subject of the investigative reports.

changed significantly among persons who watched or heard about the reports. We attempted to measure agenda-setting changes using the two different definitions of "treatment" groups as discussed above.

Table 2 shows the mean responses of the general public to questions that measured attitude changes and knowledge about specific facts contained in the television reports. The data indicate that persons in the two treatment groups significantly increased their views of the importance of police brutality after being exposed to the reports, although they did not change their ranking of brutality relative to other urban problems. In contrast, persons in the two control groups did not change their opinion of police brutality. However, the strength of these findings was weakened by unexplained significant changes on the importance of welfare fraud (see Table 2), which was the only topic on which control group responses changed. We suspected some media coverage of welfare fraud or a related issue must have occurred during the pretest to posttest interval, but we could find no such coverage. We can only speculate that either some event (that we were unable to document) occurred involving welfare fraud or our survey picked up some other "noise," which we are at a loss to explain. Public attitudes in all groups remained the same on other nonseries issues, although, again, there were changes on welfare fraud and on street repair we cannot explain.

A second attitude question asked persons about the importance of police brutality and four other law enforcement problems not related to material in the series. Again, persons in the two exposed groups showed significant changes in attitude toward police brutality in the posttest survey. Persons in the two nonaware groups showed no changes on any of the issues, as expected.

On factual questions related to the specific content of the police brutality series, change in the exposed groups was weaker.⁷ Following the series both treatment groups increased their agreement with a statement that the city compensated victims of police brutality, while persons aware of the series increased their agreement with a statement about the lack of police discipline. Neither of the "control" groups changed their views about any of the content issues relevant to the series, although, as discussed above, both treatment and control groups changed their views significantly on the ability of the government to identify perpetrators of welfare fraud. Neither treatment nor control groups changed their opinions about the veracity of a statement

⁷ It has been suggested that researchers ask some factual questions about issues *not* covered by the television reports to study possible indirect effects of the story, a suggestion that we or other researchers might want to incorporate in future studies.

Table 2. Mean Responses for General Public^a

	Channel 5				Series Aware/Not Aware			
	Watchers/Nonwatchers				Aware		Not Aware	
	(Treatment)		(Control)		(Treatment)		(Control)	
	(N = 171)		(N = 108)		(N = 163)		(N = 114)	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Importance of problem								
Police brutality	3.09	3.34*	3.42	3.28	3.18	3.36*	3.28	3.27
Violent crime	3.83	3.81	3.82	3.85	3.80	3.80	3.88	3.87
Welfare fraud	3.50	3.53	3.54	3.35*	3.48	3.38*	3.56	3.56
Unemployment	3.91	3.93	3.88	3.87	3.91	3.93	3.89	3.89
Govt. corruption	3.55	3.54	3.65	3.60	3.58	3.56	3.60	3.57
Importance of law enforcement problem								
Police brutality	3.15	3.38*	3.34	3.29	3.22	3.41*	3.23	3.28
Traffic safety laws	3.02	3.10	3.01	3.10	2.95	3.06*	3.09	3.13
Discrimination in department	2.96	3.05	3.14	2.98	3.02	3.07	3.01	3.01
Underreporting of crime	3.59	3.61	3.51	3.51	3.57	3.65	3.55	3.46
Police bribery	3.60	3.59	3.60	3.51	3.59	3.54	3.65	3.63
Fact statements								
Brutality more likely to nonwhites	2.95	2.88	3.07	3.00	3.02	3.01	2.92	2.81
Lack of police discipline	3.59	3.61	2.75	2.93	2.82	3.11*	2.82	2.68
Brutality victims get money	2.03	2.34*	2.09	2.09	2.05	2.28*	2.10	2.20
Able to identify welfare fraud	2.44	2.65*	2.51	2.79	2.49	2.65*	2.46	2.80*
Punishment for govt. corruption	2.15	2.20	2.08	2.09	1.96	2.09	2.27	2.24
Quality of service								
Police department	3.06	2.98	2.69	2.99	3.00	2.96	2.99	3.02
Garbage collection	3.28	3.35	3.15	3.07	3.25	3.29	3.16	3.18
Fire department	3.66	3.66	3.57	3.53	3.63	3.60	3.58	3.63
Street repair	1.83	2.09*	1.85	1.87	1.86	1.98	1.81	2.00
Parks and recreation	2.82	2.79	2.79	2.72	2.71	2.77	2.91	2.76

^a Higher numbers indicate more positive responses: (4 equals "very important," "agree strongly," and "very adequate").

* p .05 (asterisks indicate significant change from pre- to posttest using a dependent t -test).

that police brutality victims were more likely to be nonwhite, which was only implied and never directly stated in the Channel 5 series.

Finally, on the question of the quality of the Chicago Police Department's services in general, no similar agenda-setting effect could be detected in any group, although one might have expected a change after the repeated brutality emphasized in the television reports.

To summarize the findings for the general public survey, then, we found significant attitude changes among those exposed to the series. Seven of the 12 tests for related items changed significantly in the hypothesized direction. Such changes were strongest on the general

issue questions and weaker on statements of fact. Lack of expected change occurred in respondents' evaluation of police services in general. Tests run on items in which no change was hypothesized showed that 61 of 68 failed to change significantly.

POLICY MAKERS

Table 3 reports the mean responses of policy makers to the pre- and posttest surveys. Responses are divided according to aware and unaware groups, as divided above. Responses are given for policy makers'

Table 3. Mean Response for Policy Elite^a

	Aware (N = 24)		Not Aware (N = 11)	
	Pre	Post	Pre	Post
Personal View				
Importance of problem				
Police brutality	3.00	3.17	2.73	3.09
Violent crime	3.67	3.54	3.91	3.91
Welfare fraud	2.41	2.29	2.63	2.91
Unemployment	3.96	3.92	4.00	3.91
Govt. corruption	3.25	3.00	3.36	3.36
Importance of law enforcement problem				
Police brutality	3.04	3.25	2.73	3.18*
Traffic safety laws	1.78	1.91	1.91	2.09
Discrimination in department	2.82	2.45*	2.56	3.11*
Underreporting of crime	3.18	3.27	3.64	3.72
Police bribery	3.16	3.21	3.64	3.72
Fact statements				
Brutality more likely to nonwhites	2.96	3.26*	3.00	3.63*
Lack of police discipline	2.45	2.95*	2.55	2.91
Brutality victims get money	1.65	2.00	1.80	1.70
Able to identify welfare fraud	2.62	2.19	2.64	2.09
Punishment for govt. corruption	2.50	2.33	2.55	2.73
Public View				
Importance of problem				
Police brutality	2.64	3.36*	2.63	3.37*
Violent crime	4.00	4.00	3.74	3.87
Welfare fraud	3.09	3.27	2.65	2.74
Unemployment	4.00	4.00	3.96	3.96
Govt. corruption	3.27	3.45	2.78	3.09
Importance of law enforcement problem				
Police brutality	2.81	3.00	2.68	3.00
Traffic safety laws	2.09	2.00	1.86	1.90
Discrimination in department	2.70	3.10	2.70	2.80
Underreporting of crime	3.36	3.55	2.52	3.00*
Police bribery	3.36	3.45	2.86	2.86

^a Higher numbers indicate more positive response (4 equals "very important" and "agree strongly.")

* *p* .05 (asterisks indicate significant change from pre- to posttest using a dependent *t*-test).

opinions as well as for their perceptions of the public view. These results may have limited implications due to sample size and nonrandom selection.

Researchers expected less significant changes in elite opinions in all groups because policy makers already are familiar with the issue (and were selected for this sample because of their interest in it). Thus, neither group showed a statistically significant change on the question of police brutality as a general urban problem or as a law enforcement problem. Policy makers who said they had not seen or heard about the Channel 5 reports nonetheless demonstrated a statistically significant change in their opinion on the posttest of the importance of police brutality as a law enforcement problem. (Both aware and nonaware groups in the posttest also increased their views of the importance of discrimination in the police department as a law enforcement problem, which we address in the analysis below.)

The series had its most significant impact for elites on their views of fact statements based on the content of the reports and on their opinions of the public's view of police brutality. Aware elites show statistically significant changes on two of the three fact questions about police brutality. The nonaware groups showed significant changes in their response to the question of how important the public deems the problem of police brutality. They did not change their views of the more specific question about the public's view of brutality as a law enforcement problem.

POLICY MAKING

Policy makers were questioned in the pre- and posttest about their perceptions of the amount of time they are, will be, and should be spending on problems related to police brutality. We hypothesized that after viewing the series, they would increase their time commitment to related issues. While both elite aware and nonaware indicated a limited increase in time commitment, their responses do not allow us to draw any conclusions about their time committed to the problem of police brutality.

We also measured policy-making changes by interviewing public officials after the series and by monitoring the media to learn of changes in policy that might be attributable to the Channel 5 report. The most significant change was a general order, issued by the superintendent of police on March 8, 1983, one month after "Beating Justice" was broadcast. The order established an extensive program for identifying and treating police officers exhibiting "patterns of behavior which would warrant concern," including those against whom complaints of excessive force had been filed. Two new management posi-

tions were created to implement the new program. These changes, then, were "substantive" (Molotch et al., 1982), in marked contrast to the highly symbolic responses we found in studies two and three.

Discussion of Findings

With the completion of this third agenda-setting study, we begin to try to make sense of the varying impacts of different investigative reports and to treat some of the methodological issues raised. Because we have completed only three studies, we proceed cautiously; nonetheless, some useful observations are possible.

As in the first study of home health care, this third study found clearly discernible effects in the posttest survey of persons exposed to the investigative reports. Study two, using the *Sun-Times* series on rape, found limited changes in public opinion. The most obvious difference in the studies is the medium used. One and three, which found strong attitude changes, were television reports, while study two was a newspaper report. This is consistent with the growing support for the notion that the impact of television is greater than newspapers when the subject is dramatic and the event short-term (McClure and Patterson, 1976; Graber, 1980). "Beating Justice," with its interviews with brutalized victims and disguised voice, shadow-faced former police officers, certainly was powerful drama. It also was high-quality journalism, as evidenced by the recognition it received, winning the 1983 Chicago "Emmy" for outstanding investigative reporting and the Robert F. Kennedy Foundation award for social justice in media reporting, the first television report so honored. Thus, while the difference in medium may not be the only explanation for the difference in impact, it probably is at least a partial factor and worth exploring in future studies.

The issue itself may also be an important explanatory variable in distinguishing the effects of various investigative reports. It appears that the less information and sensitivity the public has to an issue prior to its treatment in the media, the more likely it is to be influenced by subsequent media reports. Pretests on home health care showed the public to be poorly informed and not concerned about alternatives to institutionalizing the elderly. Similarly, the public surveyed had little concern about police brutality either as a general urban problem or as a law enforcement problem. This lack of prior interest correlated to significant changes in the posttest survey responses in aware groups. In contrast, the public already demonstrated much knowledge and concern about violent crime, including rape, at the pretest stage in study two. It is possible that rape as a social problem already had reached a

saturation level on the public's agenda. Thus more opportunity existed for media influence in studies one and three than in study two.

Similarly, it may be argued that police brutality and home health care fraud are "high threshold" issues—discrete problems that are remote from most people's knowledge and opinion formation (Lang and Lang, 1981). Two additional factors may well have increased the issue threshold in the current study. First, Channel 5's emphasis on individual police officers who were repeat offenders provided a specific focus and new angle to the old story of police brutality, distinguishing it in the public's mind from the more general (lower threshold) problems of crime and rape. Moreover, the ability of the two insurgent mayoral candidates to make the series into a campaign issue may have mobilized further public concern about the problem.

The results of the third study also may shed some light on a methodological issue raised by the difference in findings between studies one and two. The first study was an experiment in which great care was taken to maximize internal validity. This was done by random assignment of respondents to treatment and control groups and the use of a selection procedure that would insure that the number of "treated" cases—those who watched the television program—would be large enough for statistical analysis. Since the investigative report was aired on a commercial television show that had low ratings, respondents were asked, and in some cases paid, to watch the program or an opposing program, although they were not directed to watch the particular segment in the one-hour show that pertained to home health care. While this procedure strengthened the internal validity of the experiment, it may have threatened its external validity—the ability of the results to be generalized to similar situations. The request to watch and payment may have prompted respondents to be more attentive to the message (Goetz et al., 1984).

In contrast, studies two and three used quasi-experimental designs, in which respondents were not randomly assigned, but were placed in treatment and control groups based on self-reported reading or viewing habits and responses to questions about their awareness of the series. This was done to enhance the external validity of the studies and because of the difficulty in getting respondents to read or to view a five-part series. The various tradeoffs between internal and external validity in constructing research designs are well documented elsewhere (Cook and Campbell, 1979). In terms of the three studies, the second and third may have stronger external validity because they measure conditions as they more naturally exist in society, while sacrificing somewhat their internal validity.

In analyzing study two, researchers speculated that the agenda-setting effect of the first study (and the limited effects of the second) might be in part due to the fact that respondents were asked to watch and thus observed more closely. The attitude changes among the general public reported in the current study, however, may indicate that the quasi-experimental design also may be effective in measuring the impact of investigative reporting. Future studies are needed to understand whether research design is a critical factor or whether differences such as the nature and presentation of the issue, the medium in which it is presented and its timing in relation to other significant public events are more important. Some unique external events affected the policy-making response to "Beating Justice," especially the bitterly contested Chicago mayoral primary. The "Beating Justice" series was aired only two weeks before election day. Charges of police brutality further fueled a debate among the candidates over the police department's professionalism and accountability.

Race was a major issue in the campaign, in which the white state's attorney, son of the late Mayor Richard J. Daley, and black Congressman Harold Washington attempted to unseat Byrne, the Democratic party organization's candidate. After two nights of the Channel 5 report, Washington seized the allegations of brutality, and the fact that brutality fell disproportionately on nonwhite victims, as campaign issues. He called a press conference in front of the police office responsible for internal discipline, obligating the other news media to cover the issue Channel 5 had raised. He vowed to fire the police superintendent. Later, political analysts cited Washington's exploiting of the police issue in the black community as a factor in his successful campaign. There is little question that the previously described policy responses to the "Beating Justice" series were a direct consequence of the black reformer's election.

Additionally, we need to understand responses to investigative reporting as functions of the media's presentation of an issue. The home health care expose focused on a limited number of unscrupulous operators who already were targets of official investigations. The rape series was largely informational in nature, including statistics on the incidence of rape, victim and perpetrator profiles, and geographic data comparing the city to the suburbs. The police brutality stories, however, practically cried out for reform. Villains and victims were portrayed in unambiguous terms. The evidence presented in the series appeared to be irrefutable. In sum, the stylistic form of an investigative report—equivocal or unequivocal—may affect profoundly its degree of impact. As we study additional investigative reports, we will con-

tinue to try to understand the link between the form of the media messages, the nature of the issues exposed, and the opinion and policy responses to them.

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Reinterpreting the Gender Gap

DANIEL WIRLS

IN THE FIRST years of this decade, political disagreements between the sexes appeared to be the newest cleavage in American politics. Men and women expressed divergent responses to opinion surveys and exhibited different tendencies in the voting booth. These differences came to be known as the gender gap. In the presidential election of 1980, women gave significantly more of their vote to the Democratic incumbent, Jimmy Carter, than did men. During the first years of the Reagan administration, women expressed greater disapproval than men in public opinion polls of Reagan's programs and performance. These and other divisions led the media, interest groups, and many political commentators to describe the gender gap as the product of women's more liberal political values and their greater preference for Democratic candidates, relative to men. Women were said to be react-

Abstract This study offers an analysis of the recent political differences between women and men that contradicts the conventional description of the "gender gap" in American politics. Beginning with the 1980 elections, the differences between women and men in their opinions on political issues, in voting behavior, and in partisan identification frequently have been portrayed as a result of women's rejection of Reagan and of Republicans and conservative values and their attraction to more liberal political positions and to the Democratic party. This description is misleading and cannot explain the full spectrum of political behavior by the sexes in the 1980s. This analysis argues that the gender gap has been the result of unequal rates of defection by men and women away from liberal values and the Democratic party. Greater movement by men toward conservative positions and the Republican party produced the gender gap. Consequently, the Republicans were never the potential victims but have always been the potential and actual beneficiaries of the gender gap.

Daniel Wirls is a Ph.D. candidate in the Department of Government, Cornell University. The author wishes to thank Benjamin Ginsberg, whose insight and encouragement initiated this study and improved it throughout the project's duration. Kathleen Frankovic graciously provided CBS News polling data. Martin Shefter, Alice Talbot, and the anonymous reviewers provided helpful comments and criticisms that improved the substance and presentation of the argument.

ing negatively to Reagan, Republicans, and revitalized conservatism.¹ According to this predominant view, the gender gap spelled trouble for Ronald Reagan in 1984 and signaled the potential coalescence of a women's voting bloc as a key constituent of a new Democratic coalition for the 1980s. This interpretation was the decisive factor behind the nomination of Geraldine Ferraro as the Democratic vice-presidential nominee. In 1984, however, the gender gap did not live up to its putative potential. The difference between the electoral choices of women and men narrowed; had only women voted, Reagan still would have won a landslide victory. Despite the unexpected results in 1984, the conventional interpretation has gone largely unquestioned, though references to the gender gap have become fewer and muted. What explains this contrast between the expectations generated by the popular interpretation of the gender gap in the early 1980s and the reality of 1984?

Proponents of the conventional argument often drew conclusions about the dynamics and future of sex-linked political differences from static measurements of opinion and voting, which showed women to be more liberal or Democratic than men at discrete points in time over the last several years. The history of the gender gap demonstrates the danger of projections based on static data and a conceptual focus on women as the relevant political actors. Longitudinal analysis of the direction of political motion by both women and men produces a much different portrait of the meaning and significance of the gender gap. This study argues that the gender gap resulted from a general movement by the electorate toward Reagan, the Republicans, and more conservative values. While both men and women have been defecting from the Democratic party and moving away from liberal values, rates of defection among men have been greater than rates among women. Hence the gender gap. Rather than reflecting an increase in Democratic and liberal sentiments among women, the gender gap resulted from more rapid and widespread movement among men than women to conservative values and the Republican party. Consequently, Reagan and the Republicans were never the potential victims, but the potential and actual beneficiaries of the gender gap in 1984.

¹ For example, Lou Harris said that "consistently, women are voting more Democratic than Republican, but most particularly, are inclined to vote against Ronald Reagan in his bid for reelection" (Ms., July 1984:53). Reagan's chief political advisor during the campaign of 1984, Ed Rollins, warned that the gender gap could "lock" the Republicans "into the status of a minority party," and that it threatened the chances for Reagan's reelection (Washington Post, June 6, 1983). For the perspective of the women's movement see Abzug (1984) and Smeal (1984).

The Data

This study uses three major sources of data. For analysis of electoral behavior the National Election Studies/Center for Political Studies American National Elections Studies from 1976, 1978, 1980, 1982, and 1984 are used. These data were made available through the Inter-University Consortium for Political and Social Research. CBS News/New York Times survey data from 1982 and 1984 on partisan identification were provided by CBS News. For analysis of trends in public opinion, the National Opinion Research Center, General Social Surveys Cumulative File, 1972-1984 is used. This source provides continuity in questions asked, and the compilation of all yearly surveys into a single file facilitates longitudinal analysis.

Interpreting the Gender Gap: The Conventional View

Four specific changes in the political behavior of women and men have contributed to the image of the gender gap and are the basis for its conventional interpretation: the participation gap, the policy opinion gap, the electoral gap, and the partisan gap. Each constitutes a separate gender-based "gap," but together they form the plausible argument for the gender gap as a product of changes in women's political behavior, as a movement away from Reagan and conservatism, if not to liberal values and the Democratic party. The participation gap is, or rather was, the oldest gender gap; for it seems to have disappeared. Until the last decade women voted less frequently and in fewer numbers than did men;² The 1970s also marked the closing of the participation gap. In 1980 women voted in higher numbers and, for the first time, in greater percentages than men.³ The policy opinion gap refers to differences of opinion between women and men on political issues. In addition to the traditional disagreements over the use of military force and violence, polls in the 1970s began to show significant differences across other policy issue areas, such as support for social welfare and environmental protection, with women consistently favoring a more liberal agenda.⁴ In 1980 and 1982 these differences over political issues appeared to manifest themselves in a significantly greater preference by women, when compared to men, for Democratic candidates. These election results are the third "gap"—the electoral gap, the origi-

² For discussions of female-male participation differences from the 1950s into the 1970s see Campbell et al. (1960) and Verba and Nie (1972).

³ For a good summary of census data showing the closing of the gap see Poole and Zeigler (1985: 123-124). The participation gap appears to have been largely an illusion. It was, for the most part, a function of differences in other socioeconomic factors, such as education, age, and income. See Welch (1977), Baxter and Lansing (1983, chap. 2), and Wolfinger and Rosenstone (1980: 42-43).

⁴ For analysis of trends in gender-based issue differences, see Baxter and Lansing (1983: 56-60) and Public Opinion (April/May 1982: 21-32).

nal source of the term *gender gap*. In 1980 women gave about 8 percent more of their two-party vote to Carter than did men. In 1982 women voted about 4 to 6 percent more for Democrats and less for Republicans than male voters. Finally, changes in partisan identification provide limited and tentative evidence for a lasting partisan division between the sexes. During the late 1960s and early 1970s, women began to comprise the majority of Democratic identifiers. This margin has increased in the 1980s (Baxter and Lansing, 1980: 67; Frankovic, 1982: 447). The confluence of women's behavior in the polls and in the voting booth gave birth to the heretofore implausible idea of the "women's vote," to be courted by Democrats and Republicans alike. From this perspective, the four "gaps" are intimately related, forming a natural evolution in political consciousness and activity within a changing society. Together they constitute the case for the dominant perception of the gender gap as a product of changing political behavior on the part of women, behavior that supposedly endangers Republicans and favors Democrats. This conclusion was never obvious, however.

Reinterpreting the Gender Gap: A Dynamic View

The alternative interpretation is that both women and men are defecting from the Democratic party and liberal values, and the gender gap has been the result of unequal rates of defection, with men outpacing women in an exodus from the liberal and Democratic fold. To test this hypothesis the three principal sources of the conventional interpretation of the gender gap—the policy opinion gap, the electoral gap, and the partisan identification gap—will be examined to show how the data have been misinterpreted and to demonstrate the accuracy of the alternative explanation offered here.

THE POLICY OPINION GAP

While women and men have expressed differences of opinion in polls on various issues of public policy, the differences are not those implied by the popular view of the gender gap. The conventional view of the gender gap emphasizes women's more liberal policy positions. These positions are said to be the source of gaps across several policy areas, specifically the use of force (militarism, defense spending), compassion (governmental involvement in social welfare, health, and promoting equality), and risk (environmental protection, nuclear power). In general, however, this argument was built from measurements of public opinion that revealed the relative positions of women and men to each other while obscuring the overall direction of opinion. The conventional interpretation of gender gaps on political issues is the first example of trends projected from largely static data.

Figures 1 and 2 reproduce data from the NORC General Social Survey from 1974 to 1984. In addition to a general measurement of political ideology, three issue surveys span the policy areas mentioned above. The trend that emerges from the data consistently contradicts the conventional view of the gender gap.⁵ Both sexes have moved toward the conservative end of the spectrum. The general political ideology survey summarizes this shift: significantly fewer men and women consider themselves liberals and many more have come to identify themselves as conservatives (see Figure 1). It should be noted that the largest change took place among men, who went from an equal division between liberals and conservatives in 1974 to a 17 percent margin in favor of conservatives in 1984. The specific issue surveys also demonstrate the swing to conservative policy positions and indicate that women and men have not diverged as much as paralleled each other in their opinions (see Figure 2). Across all areas—force, compassion, and risk—both men and women moved away from more liberal values of the early 1970s.⁶ A negative reaction to some elements of Reaganism in 1982 and 1983 partially reversed the trend toward conservatism. In most cases the reaction did not return women and men to their degree of support for liberal positions expressed in the 1970s. These reversals in opinion, in fact, only add to the strength of the second point—that the gender gaps in most cases have been stable or have shown no particular trend. Men and women generally parallel each other during cycles of left or rightward swings in national opinion, while frequently displaying a consistent difference of opinion. Even in the supposedly recent divisions over the environment and social spending, NORC data show no consistently growing gaps. In those cases where women and men did swing back toward more liberal positions in 1983, they did so together, and in several cases the gender gaps narrowed.

THE ELECTORAL GAP—THE 1980 ELECTION: WHO MOVED WHERE

The 1980 elections spawned the gender gap. Therefore, a critique of the conventional interpretation must focus on that event. The election

⁵ This section, admittedly, does not attempt a comprehensive longitudinal survey of sex-linked issue differences. Proof of this point requires further research. What makes such a comprehensive survey difficult to do is a lack of data on a consistent set of policy areas polled over a long time period. Issues come and go and, often, so do the questions. While NORC offers a consistent set of questions, the range of policy issues is limited. Baxter and Lansing (1983) offer a more detailed sketch. Klein (1984: chap. 9) and Poole and Zeigler (1985: chap. 3) also discuss issue differences, but without a longitudinal perspective adequate for addressing the problem in this analysis. Smith (1984) provides longitudinal data on gender attitudes toward violence, war, capital punishment. Although she focuses on change in women's attitudes, Gurin (1985) argues that both sexes have developed more liberal male-female role and sexual equality orientations.

⁶ Other issues covered by the NORC surveys such as gun control, capital punishment, governmental spending on health, and race issues show the same trend.

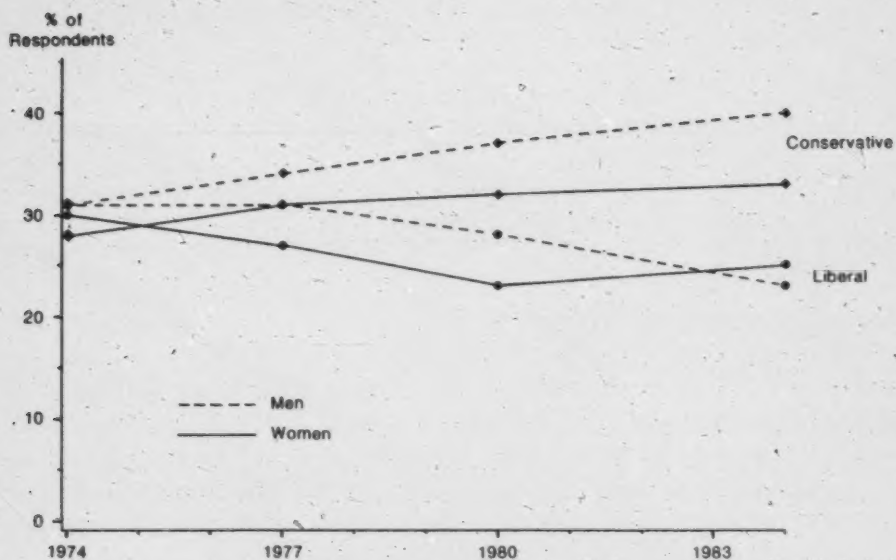


Figure 1. Consider Self Liberal or Conservative

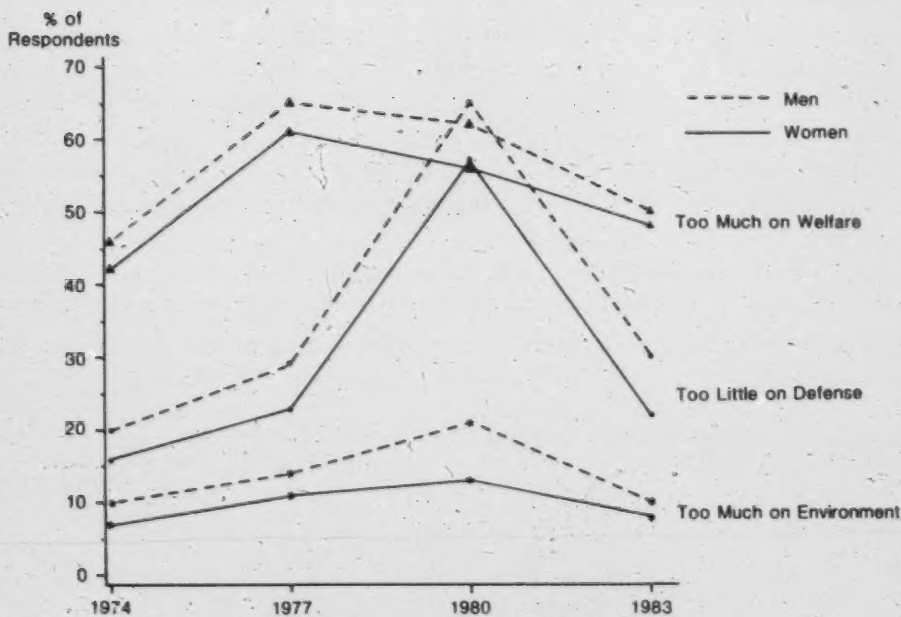


Figure 2. Attitudes Toward Governmental Spending

Table 1. The Presidential Vote: 1976, 1980 and 1984^a

	1976		1980		1984	
	D	R	D	R	D	R
Total	51%	49%	44%	56%	42%	58%
Women	51	49	47	53	45	55
Men	51	49	39	61	37	63

^a Center for Political Studies, American National Election Studies, 1976, 1980, and 1984.

results listed in Table 1 reveal the 8 percent gap mentioned earlier, but the data also uncover a fact frequently ignored in discussions of the gender gap. Women may have voted more for Carter and less for Reagan than did men, but they still gave the majority of their two-party vote (53 percent) to Reagan. In 1976, on the other hand, both sexes gave 49 percent of their vote to President Ford. There was no gender gap in 1976, despite the supposed growth of attitude differences and the female majority among Democratic partisans.

More important, women did move toward the Republicans in 1980, albeit less than did men. Male voters made the dramatic shift in voting behavior, not women. Their vote shifted profoundly—from a slim majority for Carter and the Democrats in 1976 to a 61 percent majority for Reagan in 1980. The female vote can be seen as unexpected, or as a change, only if one anticipated that an incumbent Democratic president would be defeated in a landslide, a very rare occurrence. If men had voted in the same proportions as women, Reagan would still have won, but by a narrow margin reminiscent of other recent elections, such as those in 1960, 1968, and 1976. In other words, the male vote gave Reagan his "mandate" and prompted speculation about the long overdue partisan realignment.

A comparison of women's and men's votes in 1976 with how those same voters voted in 1980, represented in Table 2, produces further evidence that the "movement" is mostly by men and that both sexes

Table 2. How Ford and Carter Voters Voted in 1980^a

	Reagan	Carter	Anderson
Ford voters			
Women	80%	13%	7%
Men	82	9	9
Carter voters			
Women	23	67	10
Men	32	62	6

^a Center for Political Studies, American National Election Study, 1980. CBS News/New York Times data follow the same pattern.

shifted toward the Republicans. Although women may have switched from Ford to Carter in slightly greater numbers than their male counterparts, the two sexes displayed roughly equal loyalty to the Republican party in 1980. There was no significant abandonment of the party by women who voted Republican in 1976. There was, however, a significant divergence between male and female Carter voters, but only in the degree to which they defected from the Democratic party. Men deserted Carter and came over to Reagan in greater numbers than women (by a margin of 9.5 percent). This relative difference between women and men can in no way be construed as a female preference for Democrats. Any party that loses over 30 percent of its former female voters to rival candidates cannot claim to be a lightning rod for the women's vote.

When the 1980 vote is assessed by party identification, the character of Reagan's victory and the gender gap become clearer. Table 3 lists the vote in 1976 and 1980 broken down by sex and party identification. The first striking feature of these data is the similarity in voting between men and women within each of the two major party categories. Democratic women and men divided their votes in almost exactly the same proportions in both 1976 and 1980. Republican men and women did the same. The two-thirds of the electorate comprised by Republicans and Democrats apparently produced relatively little of the gender gap. As we shall see, the independents account for much of the gender gap. The second observation is that the votes of Republican men and women changed very little. The only significant shift appears to have been defections from Carter to Anderson by Republican men and women, with some female defections benefiting Reagan as well. These same changes are apparent among Democratic men and women as

Table 3. Party Identification and the Presidential Vote: 1976, 1980, 1984^a

	1976		1980			1984	
	Ford	Carter	Reagan	Carter	Anderson	Reagan	Mondale
Democrats							
Women	18%	82%	22% [23] ^b	72% [77]	6%	19%	81%
Men	18	82	22 [24]	73 [76]	5	24	76
Republicans							
Women	85	15	89 [95]	5 [5]	5	95	5
Men	90	10	87 [95]	5 [5]	8	96	4
Independents ^c							
Women	54	46	49 [59]	35 [41]	16	67	33
Men	55	45	65.5 [75]	21.5 [25]	13	73	27

^a Center for Political Studies, National Election Studies, 1976, 1980, and 1984.

^b Bracketed data are the two-party vote percentages.

^c Combines the Independent and No Preference categories of the CPS partisan identification question.

well—Reagan and Anderson gained votes as Carter lost support. Once again, the data show that Republican women did not join the Democratic camp and Democratic women did not close ranks for Carter in 1980.

The most significant change represented in Table 3 is within the independent vote. Independents went from a 54.5–45.5 percent margin in favor of Ford, the loser in 1976, to a 58–28 percent margin in favor of 1980s winner, Ronald Reagan. More important is that, unlike the Democratic and Republican men and women, the independents split quite sharply along gender lines. Women independents were about 15 percent less likely to vote for Reagan and 15 percent more likely to vote for Carter than were their male counterparts. The movement by both sexes within this relatively moderate-conservative group (after all, they voted 55–45 percent for Ford) was toward the Republicans. Independent women added to Reagan's victory, but only marginally so, in comparison to the contribution of independent men. Two important facts about Reagan's victory and the gender gap emerge from Table 3. First, the independent vote contributed disproportionately to Reagan's margin of victory. According to the Center for Political Studies data, Reagan won by a margin of about 12 percent (56–44 percent). When independents are excluded from the data, Reagan's margin of victory shrinks to about 4 percent (52–48 percent). Only about one-third of Reagan's margin of victory resulted from Democratic desertion and increased loyalty among Republicans. Reagan may have owed two-thirds of his "mandate" to the independents and otherwise uncommitted. Secondly, the largest gender gap was between independent women and men. The chief partisan source of Reagan's 1980 landslide was also the locus of the widest gender gap. This apparent anomaly can be explained by rejecting the popular image of the gender gap and embracing the opposite interpretation: the gender-based voting differences in 1980 represented different degrees of deviation on the part of men and women away from their previous support of Democrats. The data show that the vote in 1980 portended no nascent boon for the Democratic party. No Republican need fear, nor can any Democrat take comfort from, a gender gap wherein women give a smaller majority of their vote to the GOP and a bigger minority of their vote to the Democrats than their male counterparts.

THE GENDER GAP IN THE 1982 ELECTIONS

The results of the 1980 presidential elections do not end the story of the gender gap. In the 1982 congressional elections another gender gap occurred. Women voted about 6 percent more for Democrats and 6 percent less for Republicans than did men. But as shown in Table 4,

Table 4. House Vote: 1978 and 1982^a

	1978		1982	
	D	R	D	R
Women	58%	42%	60%	40%
Men	59	41	54	46

^a Center for Political Studies. National Election Studies, 1978 and 1982.

both sexes gave the majority of their votes to Democrats. This was not unexpected. The House has been Democratic since 1954. Furthermore, the party of the incumbent president often suffers during midterm elections. Therefore, the 1982 elections do not represent a resurgence of Democratic vitality. Advocates of the female-oriented view of the gender gap, however, point to the 1982 elections as being indicative of women's movement to the Democratic party. If women led a shift back to the Democrats in 1982, that would be evidence for the popular interpretation of the gender gap. But the data do not support this. Comparison of results from 1978 and 1982, the last two midterm elections, indicates that the two-party division of women's votes for House candidates changed very little between 1978 and 1982. Men, on the other hand, appear to have drifted away from the Democrats and to the Republicans. While this is not conclusive evidence that the gender gap is predominantly the result of a transitory attraction by men to the GOP because of Reagan, or even a longer term commitment by men to the Republican party, the data certainly do not support the dominant interpretation of the gender gap.

THE 1984 ELECTIONS: WOMEN, MEN, AND THE REAGAN ADMINISTRATION

Some of the strongest evidence for the popular perception of the gender gap came not from actual electoral behavior or from partisan preferences, but from differences in political attitudes as expressed in public opinion polls. These were the differences that fueled Republican fears and Democratic hopes as the elections of 1984 approached. Synoptic of these recent divisions between the sexes was the gender gap over approval ratings of Reagan's performance in office. From 1981 through 1983 the Gallup polls showed an average gap of 8 to 10 percent between men's higher degree of approval and women's lower ratings (see Gallup Report, #219, December 1983). These same polls also showed significant gaps on Reagan's handling of several specific issues, such as foreign policy and the economy. Early in 1984, however, these trends failed to sustain themselves, and as the election season progressed it was clear which party would be on the winning side of the

gender gap. Women gave Reagan a 51 percent positive rating in the February 1984 Gallup presidential approval ratings, exceeding the 50 percent mark for the first time since the fall of 1981 (see Gallup Report, #220/#221, January/February 1984). In a Gallup poll taken in early September of 1984, which pitted Reagan and Bush against Mondale and Ferraro, men went for Reagan-Bush by 59 percent to 33 percent, but women also gave the majority of their "votes" to the Republican ticket by 53 to 41 percent (see Gallup Report, #228/#229, August/September 1984).

The 1984 elections made clear the inaccuracies of the conventional interpretation of the gender gap and confirmed the alternative description offered here. Table 1 shows that the gender gap was about 8 percent.⁷ In 1984 there was no doubt about the direction of the women's vote. Women went from a small majority in favor of Reagan to a 55 to 44 percent split. Table 3 disaggregates the vote by sex and party identification. Republican women increased their loyalty to Reagan. Democratic men and women each gave a slightly larger percentage of their votes to Mondale than they did to Carter, without diminishing their level of support for Reagan. This apparent increase in Democrats' support for the candidate of their party is not indicative of greater loyalty as much as depleted ranks. Many of those who in 1980 called themselves Democrats but voted for Reagan must have become part of the swelled Republican ranks by 1984, thereby paring down the Democrats to a notably smaller cadre.⁸ Independent women swung over to Reagan in large numbers. Once again, the biggest gender gap was within this independent group of voters—a group that nonetheless voted 70 to 30 percent for Reagan overall. The gender gap in 1984 was not a tug of war between the sexes over the presidency. Both women and men were pulling on the same end of the rope.

The diminished gender gap at the presidential level in 1984 led analysts to seek confirmation of the conventional interpretation elsewhere, especially at the state level of congressional and gubernatorial races. Ethel Klein (1985) uses network poll data to show that the women's vote provided the margin of victory for Democrats in at least four

⁷ CBS News/New York Times reported a gap of 4 percent, the Los Angeles Times: 7 percent, NBC News: 9 percent, and ABC News: 8 percent (see Public Opinion, January 1985: 28–29). It is therefore unclear whether the gender gap shrank. Nevertheless, it did not grow, despite indications that it would. Regardless of the size of the gender gap, the strength of the women's vote for Reagan and Republicans illuminates the weaknesses of the conventional viewpoint.

⁸ Identification with the Democrats dropped from over 40 percent in 1980 to under 38 percent in 1984, while Republican support increased in the same period from about 23 to about 29 percent. See Table 5.

Senate races. Women made the difference for some Democratic candidates in close races. To take one example, however, if in fact it took the women's vote in Massachusetts to assure John Kerry, the popular Democratic lieutenant-governor, of victory in perhaps the most Democratic state in the nation—a state that voted for Reagan in 1984—then the women's vote is not a wellspring of support as much as it is a part of an evaporating constituency. Finally, CBS/New York Times reported that men gave only 46 percent and women 48 percent of their votes to Democratic congressional candidates.⁹ The decline of women's support for Democratic congressional candidates to below 50 percent and the small size of the gap do not indicate a rejection of Republicans and conservatism, let alone a liberal voting bloc.

THE PARTISAN IDENTIFICATION GAP

Two trends in partisan identification are often cited in support of the conventional interpretation of the gender gap. First, women have come to compose the significant majority of Democratic identifiers. Secondly, in the 1980s young men and women have diverged radically in their preferences for the two major parties. Both of these trends, however, turn out to be quite problematic for the popular view of the gender gap and give further support to the argument offered here. For this analysis the interesting and significant point revealed in the data on partisan preference (reproduced in Table 5) is not that women now compose about 57 percent of all Democratic identifiers, but how they came to make up that growing majority. The data indicate that while women have maintained a stable loyalty to the Democratic party, men have defected in significant percentages. Women have become the majority of the Democratic party by default and not by active realignment.¹⁰

The second trend revealed in recent polls and noted by Frankovic is among young adults: "In the 1982 aggregated polls, the men between the ages of 18 and 24 divide 31 percent Republican and 24 percent Democratic . . . [whereas] 21 percent of women 18–24 call themselves Republicans, while 33 percent say they are Democrats" (1982: 447). This gap between young men and women is significant and surprising.

⁹ CBS poll data taken from *Public Opinion*, January 1985, p. 31. Klein (1985) cites ABC News and NBC News as reporting a gap of 6 percent, with men voting 47 percent and women 53 percent for Democrats. If true, the more important fact would seem to be the decline of men's support for the traditional majority party to below the 50 percent mark.

¹⁰ Gallup polls from 1979 to 1984 confirm this trend and even show significant defection by women from the Democratic party. See Gallup Opinion Index, #168, July 1979 and Gallup Opinion Report, #228/#229, August/September 1984.

Table 5. Party Identification: 1980, 1982, and 1984^a

	1980		1982		1984	
	Men	Women	Men	Women	Men	Women
Republican	23%	22%	25%	26%	29%	28%
Independent	38	36	39	30	36	29
Democrat	39	42	36	44	35	43

^a Figures for 1980 taken from Frankovic, 1982: 447; all other years aggregated by the author, using CBS News/New York Times polls.

The most provocative fact is not that young women are dividing themselves between the two parties in roughly the same proportions as all adult Americans have for many years (that is, pro-Democratic by margins well over 10 percent). Rather, the astounding fact is that young men are now going against the grain of the American electorate of recent history by identifying themselves as Republicans much more than as Democrats. Once again, the evidence leans toward the male-oriented explanation of the gender gap and away from the female-Democratic interpretation. The argument here is not that women are not becoming an important part of the Democratic constituency. In some ways they are. The important consideration is that the Democrats are not experiencing a net gain in support as a result of the relative changes by the sexes in political outlook and voting behavior. The Democrats are not gaining women as much as they are losing men.

Discussion

By amending the popular misapprehension of the gender gap, this study is intended to contribute to the growing debate on sex and politics. It explains the manner in which the sexes diverged in political behavior. It does not purport to offer a complete explanation for the gender gap. This analysis leaves a crucial stone unturned. The question remains as to why the sexes diverged in the 1980s. This debate is important and has received much scholarly attention.¹¹ Relatedly, the gender gaps in voting behavior and public opinion are not solely functions of the single variable of sex.¹² More multivariate analysis is needed to uncover the other social and economic forces behind the gender gap.

¹¹ To cite a few examples: Frankovic (1982), Klein (1984: chap. 9), and Mansbridge (1985). The focus of analysis here is on the linkage between gender-based issue differences and voting behavior.

¹² In addition to those cited above, see Monk-Turner (1982), Blydenburgh and Sigel (1983), Goertzel (1983) and Burris (1984). For example, Bolce (1985), whose thesis is similar to the one in this study, examines the impact of race on the gender gap.

The conventional interpretation of the gender gap sprang from a narrow empirical and conceptual focus to become a central concept in the political vocabulary of the 1980s. The results were unwarranted expectations in anticipation of November 1984. Contemporary polling technology quantified, and then the media publicized, the substantial difference between the voting behavior of women and men in 1980. All too quickly the language used to describe this phenomenon converged around a dominant interpretation—an interpretation that explained the gender gap as movement by women within the political arena. This interpretation was seized upon by those political actors who benefited from its implications, namely the recently defeated Democrats and women's groups. The Democrats needed the support of new constituencies in order to rebuild a coalition capable of recapturing the presidency. Women's political action organizations used the leverage this issue gave them to increase their influence within the Democratic party and within their constituency. In the short run, the strategy worked well for the women's movement. Its power within the party increased dramatically and was personified in Geraldine Ferraro and her candidacy. But the strategy was an electoral failure for the Democratic party. The election of 1984 exacerbated the tensions within the traditional Democratic coalition and showed that the gender gap was strategy based on illusion. In the long run the gender gap myth may benefit neither group. The women's movement may have overplayed its cards and the Democratic party will almost certainly search for other sectors of support. The use of the gender gap for partisan causes was and is unavoidable. Political opponents should do battle with the weapons provided by social science. Nevertheless, the politicization of social science has its costs, and they are evident in the case of the gender gap. The dominant interpretation of the gender gap misled analysts and politicians and obscured the more accurate and important meaning behind the numbers.

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Do Exit Polls Influence Voting Behavior?

SEYMOUR SUDMAN

EXIT POLLS are simply the latest technology used by the news media to predict elections before all the votes are in. Before exit polls, the media concentrated on key precincts, and before that simply on experienced political journalists who made predictions based on comparisons of known voting patterns to those of earlier elections. The type of information reported is not new. What is different is that the current technology is far more accurate and faster, since the data are collected and analyzed while the election is in progress.

Many politicians, political scientists, and communication researchers have tried to demonstrate that election evening news does or does not have an effect on whether people vote and how they vote. In this article, we summarize their findings and discuss the major statistical problems with these studies.

There have been essentially two procedures used to measure media effects on voting, a macro approach that compares total voter turnouts in different areas or elections and a micro approach that uses surveys of individual voters and nonvoters and determines from these respondents whether they had been exposed to election evening news (Dubois, 1983; Epstein and Strom, 1981; Fuchs, 1966; Tannenbaum and Kosterich, 1983). Underlying all of these studies is a model of voting behavior that is worth making explicit, since it will help us to analyse what is right and wrong about the studies that have been done.

Abstract This article summarizes the findings of the effect of exit polls on voting behavior. Both macro and micro methods have been used, and no methods are perfect. Exit polls appear to cause small declines in total voting in areas where the polls close late for those elections where the exit polls predict a clear winner when previously the race had been considered close.

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Most political scientists see voting as a behavior like other human behaviors, with both benefits and costs. Citizens vote when they perceive the benefits of voting as clearly outweighing the costs. More explicitly, some of the benefits of voting are related to (1) the perceived importance of the election, (2) the perceived closeness of the election, and (3) more general ideas about the importance of voting in democracies. That is to say that there are some people who vote regardless of the characteristics of the election, but many who balance the value of their vote against the perceived costs among which are (1) time required—the distance and convenience of the polling place, and the waiting time required to vote, (2) interference with other activities, and (3) discomfort (getting wet while standing in line).

When deciding whether or not to go to the polls, the potential voter is confronted by elections for a large number of positions ranging from president to senator to representative down to obscure local offices. The final decision to go to the polls is made on the basis of some decision function that combines all of these races.

Where do the exit polls fit into this? Obviously, they can influence voters' perceptions about the closeness of the election and the value of their votes. Think of this extreme scenario:

A Californian plans to vote after work in what she believes to be a close presidential election. (She has little interest in the race for congressman for her district, although it is closer.) The day is rainy and as she approaches the polling place she sees a long line. On the radio she hears that one presidential candidate has a substantial lead in other states. She says why bother and turns her car around and drives home.

Although this is a completely fictional description, it has almost certainly occurred in the past and will occur again in the future. Thus the question is not really do the exit polls have *any* effect on voting behavior, but what is the magnitude of that effect? Are 1 percent of voters affected, 10 percent, or more? The studies that have been done range from showing no effects to showing more than 10 percent of voters potentially affected. Obviously, these cannot all be right, or they may be looking at different elections with different characteristics.

An important issue is the perceived closeness of the election before the election occurred and the perceived closeness of the election based on exit poll results. Jackson (1983), whose paper we discuss in greater detail below, points out very sensibly that the only time the exit polls can have an effect is when they change voters' perceptions about the closeness of the race. This was the case in 1980, when a close race was expected based on preelection polls, but the exit polls showed a Reagan sweep. This was not the case in the 1984 elections, where the

exit polls simply confirmed what the preelection polls had already forecasted, a wide Reagan victory. Nor was it the case in the 1976 elections, which had been predicted as close and were also reported by the media as close on Election Day. In fact, the only election like 1980 may have been the 1960 election, where the preelection polls had a tight contest but where the early returns from the East Coast gave President Kennedy a substantial lead. As Jackson points out, the exit polls may have the converse effect of causing more people to vote if they indicate the race is closer than expected. Thus, in 1948 and 1968, where one-sided elections were expected, exit polls could have brought people in to vote by indicating close elections.

The observed relation between turnout and perceived closeness of the election does not, of course, mean that every voter behaves in the same way. Some voters may be encouraged to vote when the election is not close because they are sure to be on the winning side (a bandwagon effect). Others may vote to reduce the magnitude of the anticipated winning margin (an underdog effect). Overall, however, neither bandwagon or underdog effects have been observed in national elections.

In any event, this discussion suggests that one needs to look at the characteristics of elections and that for many elections no effect would be expected. The 1980 election, because of its special features, and because it was the first one in which exit polls were widely used, has been examined most often, and we limit our discussion to this election.

The Micro Level

On a micro level, the paper by Jackson is the only one available for the 1980 election. There had been earlier uses of individual data by Mendelsohn (1966) in an analysis of the 1964 election, but since this had been predicted as a very large victory for President Johnson and the early results indicated the same thing there was no reason to expect an effect, nor was there any. A recent paper by Adams (1985) about voting behavior in Oregon during the 1984 presidential elections also found no effects since the substantial victory for Reagan had been anticipated.

Jackson used data from the University of Michigan Presidential Study in 1980. Respondents were interviewed before the election to determine if they were registered and their likelihood of voting. A sample of 1814 were reinterviewed two months after the election and were asked about their exposure to different kinds of news coverage: The exit polls, Carter's concession speech, media projections of the winner, election results, and newspaper results. The actual voting be-

havior of respondents was obtained by checking voting registers, since it is well known that some people claim to vote who did not do so.

Given the data, Jackson estimated the change in likelihood of voting for a person who had not voted before 6 PM EST as a linear function of the effect of hearing various aspects of the election coverage. Perhaps the easiest way to summarize his results is to show his table on estimated turnout probabilities by region based on whether respondents had or had not heard election results (Table 1). To read this table, Jackson predicts that 43 percent of registered voters in the West would have voted before 6 PM EST and that after 6 PM 50 percent would have voted if no one heard news of the election, but only 38 percent would have voted if everyone had heard the news.

From this he concludes that up to 12 percent of voters could have been affected by the early news *if they had heard about it*. His results, which unfortunately are not given by region or voting status indicate that only one of six persons interviewed had actually heard any of the exit poll results before the polls closed in their state. If one used this figure for nonvoters everywhere, it would suggest that between 1 and 2 percent of potential voters did not vote because they heard the results of the exit poll. This figure could be as high as 3 or 4 percent in the West if the percentage who had heard the exit polls results was much higher than everywhere else. In a just published study, Wald (1985) presents evidence that nonvoters are less likely to know whether an election is or is not close and thus unlikely to have heard or been affected by exit polls.

There are several problems with the Jackson approach, some of which he recognizes. The first is that it depends on respondents' memory of when they voted and heard or saw news two months afterwards. This is an extremely difficult memory task subject to substantial error. Jackson argues, however, that it would affect his estimates only if nonvoters had worse memories than voters, an event he finds unlikely. Jackson may be right, but it is certainly possible that some social desir-

Table 1. Estimated Turnout Probabilities

	Average Regional Respondent			
	Before 6 PM EST	After 6 PM EST		Differ- ence
		Not Heard	Heard	
East	0.81	0.14	0.08	0.06
Midwest	0.56	0.22	0.10	0.12
South	0.70	0.18	0.09	0.09
West	0.43	0.50	0.38	0.12

ability effects may be causing differential memory errors between voters and nonvoters. Nevertheless, this is not the most serious problem.

A second problem inherent in any micro approach is in the rapid shrinking of sample sizes. Of the initial sample, only 357 respondents did not report voting before 6 PM EST. When this sample is split by region, and data are given by likelihood of voting and having heard exit poll results, the results must be based on very small samples. This does not mean that the results are biased, but that they are unstable. The regional results that show no differences between the Midwest and West may be real, but to me they suggest the effect of small samples.

Most critically, Jackson makes the assumption that the analysis closely resembles a natural experiment, with some subjects receiving the news when it could alter their behavior (the experimental group) and others not being so exposed (the control group). Unfortunately, it is equally likely that the behavior that was to have been affected, voting, was actually the cause of whether or not news was heard. That is, a prior decision to vote is likely to have reduced the probability of respondents being home or someplace else where they could have heard election news. That would indicate that the relationship exists between hearing news and voting, but the causality is not clear. Most likely, causality goes in different directions for different respondents.

Thus, although intuitively one would expect the micro data would be able to answer the question, we see from an examination of Jackson's careful study that there are major practical problems that, at least to date, have not been resolved. The 1984 Adams study in Oregon that identified nonvoters and interviewed them on the night of the election day to determine reasons for nonvoting seems to be the most powerful micro method yet devised, but unfortunately it studied a landslide election. There are also serious logistical problems in trying to expand this approach to anything approaching a representative national study.

The Macro Level

The alternative method of aggregate analysis has been used widely (Wolfinger and Linquti, 1981; Tuchman and Coffin, 1971). Most of these papers have looked at a limited number of variables or unsuitable elections, or make unrealistic assumptions. The most realistic paper is by Delli Carpini (1984).

The data are simply aggregate voting data by congressional district. The source of data for Delli Carpini, as well as most others, is statistics summarized by the Congressional Quarterly. To see the effects of the news of exit polls and other election night news in 1980, the percentage of registered voters who voted in 1980 is compared to the same ratio in

Table 2. Surge and Decline in Turnout Rates for the 1980 Presidential and Congressional Races

	<i>Presidential Race</i>	<i>Congressional Races</i>
Total districts (<i>N</i> = 435)	-2.7% (.3)	-3.8% (.6)
Precall districts (<i>N</i> = 245)	-2.1% (.4)	-3.4% (.4)
Postcall districts (<i>N</i> = 190)	-3.2% (.4)	-4.4% (.6)
Difference	-1.1%*	-1.0%*

NOTE: Percentages are the mean amount of surge or decline in the respective groupings. Figures in parentheses are standard errors.

* $p \leq .05$.

the 1968, 1972, and 1976 elections for districts where the polls were not and were still open after 8 PM EST when NBC announced the results of their exit survey.

These data are summarized in Table 2. It may be seen that overall there was a decline of 2.7 percent in the voting for president and 3.8 percent in voting for Congress as compared to the average over all four elections. For both races, the difference between the precall and the postcall districts was 1 percent. Not all of this difference may be due to the early call of the election, but the overall impact is small, although not zero.

The macro methods have problems of their own. The first problem is one of aggregation. Della Carpini groups all the states where exit poll results were announced before the polls closed. In 17 of the 28 states where this occurred, the polls closed within an hour of the announcement of results. One would expect that any effects would be reduced in such states. Secondly, Della Carpini did not report on the effect of closeness of the election although he evidently did some analyses controlling for this variable.

Another problem is that other factors may be impacting on turnout. Weather is always a factor and none of the macro analyses control for it. Also the candidates involved influence turnout. Several political commentators have observed that the reduced turnout in California in 1980 was because neither presidential candidate was very popular with the voters. It has been suggested that President Carter's early concession speech may also have been a factor.

Still another problem is that the analyses have usually concerned only the presidential election when the issue of reduced turnout has been raised primarily about congressional races. Della Carpini, however, reports both presidential and congressional races. A final techni-

cal issue is that redistricting of congressional districts makes long-term analyses difficult.

To overcome some of these problems an additional analysis was done comparing voter turnout for *close* congressional elections in 1980 with those in 1976, 1978, 1982, and 1984. Close elections were defined as those in 93 districts where the race was decided by less than 15 percentage points in 1980. The states were put into three groups—those where exit poll results were announced after the polls closed, those where they were announced within an hour before poll closing, and those where they were announced more than an hour before closing.

The results are given in Table 3. If one compares voting for Congress in the close districts between 1980 and the other two presidential election years on either side of it, one sees absolutely no difference by the time the exit polls were announced, indicating no net exit poll effects. Indeed, the results suggest a slightly higher turnout overall in these districts in 1980 than for the average of 1976 and 1984.

If, on the other hand, one compares 1980 to the two congressional elections in 1978 and 1982, it may be seen that in districts where the exit polls were announced more than an hour prior to the polls closing the ratio of 1980 to the nonpresidential election years surrounding it was 1.24 while in other districts the ratio is around 1.30, a 6 percentage point difference. Since the standard error of the difference of these ratios is about 7 percentage points, this difference is not statistically different than zero, considering these districts as samples in time of what would occur in similar elections.

It should also be noted that because it has so many districts California dominates these results. If California were excluded there would be

Table 3. Average Congressional Voting per District, 1976–84

	After Polls Close ^a	One Hour or Less Prior to Polls Close ^b	More than One Hour Prior to Polls Close ^c
1. 1980 vote	192.1	195.1	187.8
2. 1978–82 vote	147.0	150.4	151.5
3. Ratio (1):(2)	1.31	1.30	1.24
4. 1976–84 vote	189.8	192.7	185.5
5. Ratio (1):(4)	1.01	1.01	1.01
(N)	(40)	(29)	(24)

^a Alabama, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Mississippi, Missouri, New Hampshire, New Jersey, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Vermont, Virginia, West Virginia.

^b Arizona, Arkansas, Colorado, Louisiana, Maine, Michigan, Minnesota, Nebraska, New Mexico, New York, North Carolina, North Dakota, Rhode Island, South Dakota, Texas, Wisconsin, Wyoming.

^c Alaska, California, Hawaii, Idaho, Iowa, Kansas, Montana, Nevada, Oregon, Utah, Washington.

no differences between the remaining states where the polls closed late and the other states where they closed early.

Thus, depending on the comparison, the differences are zero or 6 percentage points, and if these results are averaged, the average difference is around 3 percentage points.

One issue that is considered by both Jackson and Della Carpini is whether or not there was a differential effect on Democrats or Republicans. Here they reach diametrically opposite conclusions. Jackson concludes that Republicans were most likely to be affected by hearing the early results and that the knowledge of the outcome deters supporters of winners more than supporters of losers. He points out, however, that his results are not statistically significant. Della Carpini concludes, on the other hand, that Republicans were unaffected while the decline in postcall districts was among voters who had early voted Democratic. He points out that his results could simply be caused by the fact that Carter was especially unpopular in the western United States, where polls stayed open later. This explanation has enough reasonability to throw his conclusions into doubt.

One might simply classify congressional districts by whether or not they remained Democratic or Republican in 1980 or whether they switched allegiance. In the close races discussed in Table 3, the percentage of districts that switched from Democrat to Republican in each of the three groups of states arranged by when their polls closed was between 20 and 21 percent. Clearly, there are no switching effects evident for either party.

Summary

As with so many other interesting real-world events, measuring the exact effect of one thing, the exit polls, and controlling for everything else becomes very tricky. Based on a consensus of the data, there is a possibility of a small decrease ranging from 1 to 5 percent in total vote in congressional districts where polls close significantly later than 8 PM EST in those elections where the exit polls suggest a clear winner when previously the race had been considered close. No more precise estimate is possible with the data available.

Whether this is a "significant" effect requiring legislation is not a statistical but a political issue. Most survey researchers will think not, but state and federal legislators ultimately will decide.

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Television's Impact on High School Achievement

GARY D. GADDY

FROM THE TIME when television was little more than a possibility, observers of the medium have regarded it alternately with hope and with fear. To use E. B. White's description (1938), television seemed likely to be either "an unbearable disturbance of the general peace or a saving radiance in the sky." One particular concern was its potential effect on academic achievement.

When television became reality in the early 1950s, the concern about its effect on children and their school performance mounted. (See, for example, Shayon, 1950.) These fears receded after the early studies failed to produce clear evidence that television was related to achievement.

What little controversy remained at the end of the 1950s was laid to

Abstract Using data from the first two waves of the High School and Beyond project, this study examines the reciprocal relationship between media use and academic achievement among American high school students. The hypothesis of the study was that TV influences achievement negatively as it displaces other, more beneficial activities, but that reading influences achievement positively, particularly reading skills. It was also hypothesized that achievement influences media use: specifically, achievement negatively influences television use and positively influences reading. The study used multiple regression in a cross-lagged model. No clear evidence of negative effects of TV on achievement were found. TV, however, was found to be relatively less beneficial than reading for pleasure. And while achievement's influence on the amount of TV viewing was not supported, reading achievement does seem to influence the amount reading.

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rest by the parallel findings of two major studies of television and children: Himmelweit et al. (1958) in England, and Schramm, et al. (1961) in America. Both studies found some differences in achievement in favor of children without TV, but they were either statistically insignificant or counterbalanced by other significant differences in favor of children with TV.

A review of the early studies indicates that, although the evidence was weak, the research did suggest that negative effects existed, though on a smaller scale than was first supposed. So, despite—or perhaps because of—the lack of any conclusive evidence, the issue fell dormant. It may be that such benign neglect could be justified in the warm glow of reports of the continually rising national test scores throughout the 1950s and into the 1960s. After all, how could television be so bad when its introduction was followed by almost two decades of academic progress (see Figure 1).¹

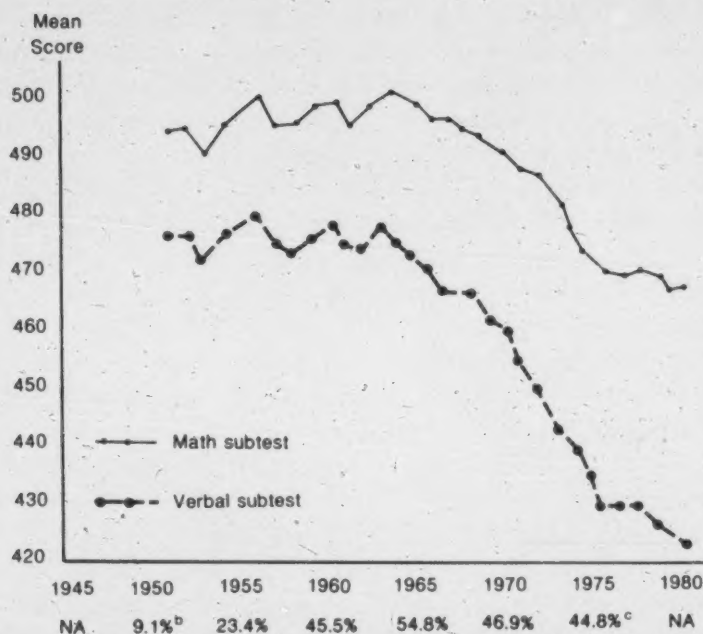
But with the reversal of this trend (see Copperman, 1980), particularly the unprecedented drop in national Scholastic Aptitude Test score averages, the issue was rekindled. A minor irony in this turnabout is that television was raised as a possible contributing factor in this decline by one of the same researchers who had 15 years earlier helped lay it to rest (Schramm, 1976).

Apparently spurred by this downturn, research on the role of television revived. More recent and generally more sophisticated studies have garnered evidence that television may indeed slow cognitive growth (e.g., Hornik, 1978; Gadberry, 1980). This revival has stimulated several examinations of the state of research itself. While early reviews (e.g., Finn, 1953; Coffin, 1955) were generally inconclusive, more recent summaries (Hornik, 1981; Morgan and Gross, 1982; Comstock, 1982) all support, to varying degrees, the existence of a negative impact of television on achievement. The only clearly dissenting view from this new consensus comes in the form of a news release from an agency of the television industry (Television Information Office, 1982), which appears extremely selective in its reading of the evidence (see Gaddy, 1984: 6–7).

The Process of Effects

While the accumulating evidence suggests a causal effect of television on achievement, the process by which such an effect might take

¹ Figure 1 is misleading if it suggests no substantial changes in performance between 1950 and 1965, since during that period the percentage of students taking the test increased from 9 percent to 55 percent. Without overall progress, this increase is likely to have led to a substantial decline in mean scores.



^a Figure 1 is based on Eckland, 1982, Table 2.1, p. 13. Figures are for all SATs taken in a given year, including those at any grade level, and counting those scores from individuals who repeated the test more than once. Since 1980, SAT scores appear to have stabilized at the bottom of the slide (see Educational Testing Service, 1985, for latest score reports).

^b Based on 1951-1955 only.

^c Based on 1975-1976 only.

Figure 1. The Historical Trend in the Scholastic Aptitude Test Scores (SATs) (Annual Means for the Verbal and Math Subtests from 1951-52 to 1979-80)^a

place is less clear. Hornik's (1981) review of the research outlines six major hypotheses describing how television influences cognitive growth, either positively or negatively. The six hypotheses are: learning of school-equivalent content, interest stimulation, learning of new cognitive skills, learning of instrumental information, development of an intolerance for the pace of schooling, and displacement. While each of these hypotheses has its proponents, they vary in the evidence which may be adduced to support them.

LEARNING OF SCHOOL-EQUIVALENT CONTENT

The hypothesis that television contributes to learning of school-equivalent content is a formal explication of television as a "window on the world." Research has shown that television *can* be an effective teaching tool when it is explicitly designed to do so, as is demonstrated in studies of "Sesame Street" (even the revisionists, Cook et al., 1975, admit that). What has not been demonstrated is whether it *is* an effective teaching tool (Comstock, 1978; Williams, 1981)—as it is presently

constituted and used. The evidence that suggests that television has a negative influence on achievement, while not definitive, clearly militates against any hypothesis that suggests it has a positive influence. Only as a source of vocabulary for young children has it consistently been shown to have a positive effect (Schramm et al., 1961; Selnow and Bettinghaus, 1982), and for the latter study this effect appears to be mainly attributable to intentionally educational programs such as "Mister Rogers" and "Sesame Street."

INTEREST STIMULATION

The interest stimulation hypothesis proposes that television stimulates viewers' interest in ideas and topics that they may pursue in forms other than television, particularly book reading. While viewing may stimulate interest in a particular book dramatized on TV (see Splaine, 1978), it does not appear to create an interest in reading, but merely redirects that interest from other reading choices.

The overall impact of television seems to be a reduction in reading, as evidenced by studies of library circulation (Parker, 1963; Tihihonen, 1969). These studies indicate that the introduction of television redirected content (from fiction to nonfiction) and reduced total reading: evidence contrary both to this hypothesis and to the early hopes of the publishing industry (Publisher's Weekly, 1950).

LEARNING OF NEW COGNITIVE SKILLS

The learning of new cognitive skills is a hypothesis that has been advanced most prominently by Salomon (1979), who contends that TV viewing provides practice in the symbol system of television and may allow for the transfer of those skills to the interpretation of other media. While the learning of new cognitive skills has been demonstrated experimentally (e.g., Salomon and Cohen, 1977), extending these findings to more ecologically valid circumstances has succeeded only partially (Huston-Stein and Wright, 1979). Further, it is not clear what impact, if any, these "new cognitive skills" would have on academic achievement, since our educational system is fundamentally print-oriented (Dorr, 1982).

LEARNING OF INSTRUMENTAL INFORMATION

The instrumental information hypothesis says television influences achievement as it molds children's thinking about school, influencing their expectations and aspirations (Berry, 1980). The evidence regarding the association between TV and educational and occupational aspiration, however, is somewhat mixed. Bailyn (1959:29) found high media exposure (TV, movies, and comic books) associated with pas-

sive occupational ambitions, but only for boys. Morgan and Grosz (1982) found high TV viewing to be associated with lower educational and occupational aspirations for all adolescents one year later, but with higher aspirations for females two years later. Even if aspirations are related to attainment (see Otto and Haller, 1979), the curious and selective pattern of relationships found in the media studies casts doubt on the dependability of these findings.

DEVELOPMENT OF AN INTOLERANCE FOR THE PACE OF SCHOOLING

The hypothesis that television instills an intolerance for the pace of schooling has been promoted by such popular critics of television as Winn (1977). While one study (Anderson et al., 1977) using a brief experimental treatment found no immediate effect of television on tolerance for slow-paced learning, its relevance is limited. As Hornik points out (1981:203), the hypothesis posits accretion, not instantaneous effect. But two other studies (Furu, 1977; Gadberry, 1980), which do address longer-term effects, suggest that television does increase impulsivity, a reasonable operationalization of "an intolerance for the pace of schooling." These studies also suggest that this intolerance is a content effect, not a medium effect (as suggested by Winn, 1977: 33-47), since commercial TV programs were related to increased impulsivity, while noncommercial, "educational" programs were related to increased reflectivity.

DISPLACEMENT

The earliest and most studied explanation for the supposed negative effects of television on achievement is displacement. This hypothesis, paired with the concept of functional equivalence, says that television tends to displace other activities which serve the same needs but are less readily available or require more effort. Further, it argues that television provides less opportunity for "skill practice, contingent reinforcement and active exploration" (Gadberry, 1980:46) than the activities which it displaces, and so inhibits cognitive growth.

The Displacement of Functional Equivalents: Since television consumes 20 hours or more per week for the average teenager (Nielsen, 1981), it must displace something. That television has substantially displaced other "functionally equivalent" entertainment media is incontrovertible. It has substantially displaced cinema, radio, and comic books (e.g., Maccoby, 1951; Furu, 1971).

The most precise estimates of displacement in general come from studies of the use of time. A cross-national comparison of TV owners and nonowners (Robinson, 1972) shows that TV ownership means higher mass media use (including TV, 58 minutes more per day), but

lower use of radio (-61%), movies (-52%), books (-41%), and magazines (-28%). Presumably, a substantial part of these changes are due to TV.

The critical question here, however, is not whether television has displaced other activities, but whether or not the displaced activities were more educationally beneficial than the activity (TV) which displaced them. While the displacement of reading would appear to be detrimental to reading achievement, the direct evidence relating to other displaced media is very limited. Only the comparison of television to print seems to provide any direct and clear evidence that TV causes negative displacement (e.g., Wilson, 1974).

Lesser displacement of activities less similar functionally to television have also been noted. For example, studies of TV suggest reductions in time spent in play (Schramm et al., 1961:73), in sleep (Maccoby, 1951; Schramm et al., 1961:73), and also in one activity that would appear to have a direct bearing on academic achievement, homework (Himmelweit et al., 1958:306; Furu, 1971:17). The displacement of homework has been estimated at about 15 minutes a day (Schramm et al., 1961:14; Furu, 1962:21), an amount generally considered to be modest (e.g., Maccoby, 1951).

Displacement as a Mediating Factor. While there is substantial evidence of the displacement effect of television, some suggesting this displacement is negative, little research has directly addressed displacement as a mediating factor in the effect of TV on achievement except for two studies: a longitudinal study (Furu, 1962) and a field experiment (Gadberry, 1980). While Furu's study found no overall relationship between viewing and reading achievement, it did for one of four subgroups, seventh-grade boys—the group which also showed the largest displacement effects for reading and homework. Gadberry's study of first graders showed a significant increase in performance IQ for those children whose TV viewing had been reduced by about half for six weeks. Decreased viewing also led to increased time reading and perhaps coloring: activities positively related to growth in performance IQ. This suggests that for young children television reduces cognitive growth as it displaces more beneficial and ability-enhancing activities.

A General Approach to Displacement. Despite the suggestions of these specific examples of negative displacement, a broader approach to this hypothesis might include a larger definition of displaced activities. Clearly, television displaces a variety of activities—some apparently academically beneficial, others not—most of which individually, or only over the short term, appear to be trivial in consequence. One fallacy of a piecemeal approach to displacement is that the cumulative

impact of a "trivial" effect over time may be large. Fifteen minutes of homework may not be much, but 15 minutes per day over 180 school days is 45 hours, and over the course of 12 years of school would total 540 hours—not a trivial amount, especially when this is considered in light of the evidence that "exceptional" cognitive performance can be attained with one hour of practice a day over several years (Walberg et al., 1984).

Further, some of the activity which television does not directly displace it overlays. For example, homework may be reduced directly in amount, or indirectly, when television is watched while homework is done (Maccoby, 1951; Himmelweit et al., 1958:306). Similarly, reading has become more of a "secondary activity" since the introduction of TV (Robinson, 1980:152). If this division of attention reduces the productivity of these activities substantially, then this displacement in quality could be comparable to the more obvious displacement in quantity.

The larger question is not whether the impact of television on one specific behavior has any measurable effect, but whether the total impact across the full spectrum of potentially modified behaviors over time has. Rather than examining only those specific activities presupposed to be displaced, and presupposed to be cognitively beneficial, a more general conception of displacement estimates the overall effect of television mediated through the full range of potentially displaced activities, both beneficial and detrimental. Thus, this framing of displacement acknowledges that television may influence achievement negatively or positively. In other words, the impact of an increase in television viewing will be inversely related to the educational benefit of the activities it displaces.

The overall impact of television on a particular population is hypothesized as the net of the benefit gained while viewing minus the benefit lost from the activities displaced. While television may be helpful to younger children in some respects, it does not appear, in its normal use, to benefit students of high school age or above. If cognitive benefit requires appropriate cognitive challenge, then television will benefit only those who are mentally challenged by it. The relatively low level of effort required by television (particularly as compared to print, Csikszentmihalyi and Kubey, 1981), suggests a declining benefit from television as mental age increases. In contrast, the greater challenge from reading suggests positive effects for reading on achievement, which may not decline with increasing age or mental ability because of the greater "freedom of choice" and "diversity of subject matter" available in print (Himmelweit et al., 1958:36).

Some empirical evidence supports an ability-related decline in benefit from TV. Heavy TV viewing is negatively related to reading achievement for those of medium and high IQ but positively related for those of low IQ (Morgan, 1980), and the negative partial correlation between viewing and reading achievement increases across the elementary grades (Neuman and Prowda, 1982). Similarly, Schramm et al. (1961:274) found declining benefit in vocabulary gain from TV between the first and the tenth grade.

HYPOTHESES

On the basis of the general conception of displacement and the assumption that for the average high school student the sum of the activities displaced by TV is more beneficial to achievement than the TV which displaced it, it may be hypothesized that, *for high school students as a group, television viewing leads to lower achievement.*

Because the effect of displacement is proposed to be directly related to the nature of the activities displaced, it may be hypothesized that *television viewing interacts with the educational environment in its impact on achievement. Specifically, the effect of television viewing on achievement will be more negative for those from educationally rich environments than for those from educationally poor environments,* since the probability is greater for the former that the activities displaced will be more beneficial than TV, and for the latter the probability is greater that the activities displaced will be less beneficial than TV.

Reading, in contrast to viewing, is proposed to be beneficial to achievement as it practices a skill fundamental to scholastic achievement—a skill directly measured in many achievement tests. Therefore, it is hypothesized that, *for high school students, reading leads to higher achievement.*

One of the confounding factors in many previous studies of television and achievement has been the failure to consider the impact of achievement on television. Not only may media use influence achievement but achievement may influence media use. Schramm's fraction of selection (1971) proposes that media are selected on the basis of the ratio between the reward offered and the effort required. It follows that if as achievement increases (particularly in reading skills) effort required for reading falls and rewards rise, then *achievement will positively influence the selection of reading.* In addition, because of the relatively minimal effort required by television and the declining benefit it offers as ability increases, it follows that *achievement will negatively influence the selection of television.*

Method

To address the questions posed here, data from the High School and Beyond study (Peng et al., 1981) directed by James Coleman were analyzed. Designed as a national longitudinal study of secondary education, it includes a battery of tests specially created for the assessment of academic achievement. The sample is very large (30,263 sophomores and 28,465 seniors), representative of the United States (drawn using a multistage cluster design stratified at the school level), and currently includes two waves of a panel, collected in 1980 and 1982 with a third wave scheduled for spring 1984 (see National Center for Education Statistics, 1983).

The present study is based upon the analysis of a portion of the 1980 sophomores who were resurveyed in 1982. This sample consisted of students who completed both questionnaires and some of the achievement tests in both waves. Even these respondents number 20,308, so for actual analysis, random samples of this larger sample were taken, leaving subsamples ranging from 2365 to 5074.

MEASURES

Among the vast array of measures on this omnibus survey are a number of tests of academic achievement (comparable to short versions of the Scholastic Aptitude Tests in Figure 1), measures of leisure time use (including television), and an assortment of indicators of personal and social context.

Academic Achievement. The achievement measures include four multiple-choice tests: vocabulary (21 items), reading comprehension (20 items), basic math (28 items), and advanced math (10 items). The same tests were administered in the base year and in the follow-up. In addition, self-reported school grades were analyzed, after being re-coded to approximate a college GPA with eight categories ranging from 4.0 ("A's mostly") to 0.5 ("Below D").

Media Use. Television use was measured by answers to the question, "During weekdays about how many hours per day do you watch TV?" Each of the seven categories was assigned its midpoint, with .75 given to "less than 1 hour" and 5.5 to "5 or more." Two other measures of media use, "reading for pleasure" and "reading the front page of the newspaper" were coded according to their approximate weekly frequency in four categories ranging from 0 ("rarely or never") to .75 ("less than once a week") to 4 ("every day or almost every day").

Educational Resources. Indicators of educational resources included a series of potentially educational material possessions:

specifically, having in one's home a daily newspaper, encyclopedia or other reference books, more than 50 books, a room of one's own, and a pocket calculator (all binary coded). In addition, the students' reports of parental educational attainment were included as indicators of personal educational resources, with measures collected in both waves used to increase reliability. The sample was split into high, medium, and low educational resource groups according to the ranking of individuals by an equally weighted sum of material and personal resources, where the weighting of individual items was done using standardized scores.

Other indicators include exposure to education measured by the number of days absent not including illness and by the number of days late to school between the beginning of school and Christmas vacation (both in days), time spent on homework (in hours per week) and how often the student comes to class with homework done (from 0 for "never" to 3 for "always"), being in an academic or college preparatory program and attending a private school (both binary coded). Standard measures of demographics were included as controls, including race, sex, Hispanic origin (binary coded), family income (coded by ordinal rank of the income category), number of parents at home, and number of siblings.

Treatment of Missing Data. Respondents missing data on individual questions were assigned values equal to the mean for the group under analysis (e.g., blacks or females). On family income, respondents missing data on the question with a larger number of categories were assigned according to their answers on a three-category income question if they provided an answer to that question.

STATISTICAL MODEL

The analysis technique used in this study is linear structural modeling of two-wave panel data, a method which is preferable to the older cross-lagged correlation technique, even when correction formulas were used (Kessler and Greenberg, 1981). The primary model was a multiple cross-lagged regression in which the later values of each of the criterion variables were regressed on the earlier values of the criterion as well as the earlier values of the other predictors. This procedure estimates coefficients for each criterion that represent the contribution of each predictor on the change in the criterion, controlling for the contribution of the other predictors.²

² This model simultaneously controls for all the earlier values of all of the variables listed. Exogenous control variables are also included but only as predictors and not as criterion variables.

This analysis makes the usual assumptions necessary for ordinary least squares, that

Results

In the correlations between television and achievement (Table 1), this study clearly replicates the consistent finding of past studies—a uniform and highly significant negative correlation between television and achievement. Further, this relationship holds across the entire series of achievement measures, and for both grade levels.³ If these correlations were used as a test of our first hypothesis (as has been done), then it would have been overwhelmingly confirmed. Likewise for the second hypothesis, since there is a clear pattern of increasing negative correlations as one moves from the low to the high resource

is, that the disturbance terms of the exogenous and endogenous variables are homoscedastic and uncorrelated with each other and any other explanatory variable, and that the equations are linear in their parameters (Marsden, 1981:14–15). Further, it implicitly assumes that the variables are measured without error and that there are no instantaneous effects among the variables. If these assumptions hold, the parameters of this model represent unbiased estimates of causal effect.

Technically, the estimates produced will not be unbiased estimates of the parameters of the cross-lagged effects unless there are no instantaneous effects. Both cross-lagged and instantaneous parameters cannot be simultaneously estimated without very strong assumptions that do not appear to be justifiable in this context. Implicitly assuming no instantaneous effects, as has been done in this analysis, will not lead to estimates biased in direction, unless the instantaneous and lagged effects differ in sign, which seems very unlikely. Further, though the estimates will not be "pure" estimates of parameters of the cross-lagged model specified by Kessler and Greenberg (1981:28–31), they do represent the cumulative effects of the antecedent variables, and in that sense are not biased at all. So, to put it even more technically, the reduced form of the lagged effect is estimated without bias even if the distributed lag effects model is correct.

It is almost certain, however, that none of the assumptions made here are fulfilled entirely. For example, none of the variables contain no error, which means attenuated estimates. Likewise, correlated error between the dependent variables and their lagged values also attenuates estimates of effect (except for the stability coefficients which are inflated). A faulty assumption of linearity also attenuates estimates. A test for nonlinearity in the TV parameter, however, turned out negative.

For control variables, however, measurement error or nonlinearity may attenuate the *reduction* in the spurious relationship. Further, correlated errors (caused by the exclusion of significant "third variables") have no simple and predictable result. For this reason, given the current limited state of knowledge about the processes of achievement and media use, the findings of this study should be viewed as tentative. However, many potential "third variables" have been controlled for in this analysis—including intelligence, implicitly measured by earlier "achievement" scores (see Heyns and Hilton, 1982), and the measures used appear reasonably reliable. So, in the absence of specific, plausible nominations for missing controls, these results should not be summarily dismissed as invalid, particularly since two-stage least-squares results (see Gaddy, 1984) generally confirm those reported here. The pattern of signs was very similar, and although the two-stage least-squares estimates were usually higher in absolute value, they were no more likely to be significant. Along with moderately high cross-temporal correlations (which suggests reasonable stability but some change to be analyzed), this indicates lag misspecification is unlikely to be a great problem.

³ The zero-order cross-lag correlations do not differ substantially from the simultaneous correlations displayed in Table 2.

Table 1. Zero-order Correlations Between Media Use and Achievement Variables^a

<i>Television and Achievement—All Students and Subgroups</i>						
<i>Achievement Measure</i>	<i>All Students</i>		<i>Blacks</i>		<i>Females</i>	
	<i>Soph.</i> <i>n</i> = 5074	<i>Sr.</i>	<i>Soph.</i> <i>n</i> = 2365	<i>Sr.</i>	<i>Soph.</i> <i>n</i> = 4997	<i>Sr.</i>
Vocabulary	-.158	-.176	-.031	-.023	-.177	-.186
Reading	-.160	-.155	-.042	-.011	-.168	-.160
Math level 1	-.173	-.188	.008	-.011	-.202	-.196
Math level 2	-.157	-.169	-.021	-.030	-.159	-.176
Grades	-.128	-.127	-.032	.021	-.146	-.136
<i>Television and Achievement—Educational Resource Groups</i>						
<i>Achievement Measure</i>	<i>High Resource</i>		<i>Medium Resource</i>		<i>Low Resource</i>	
	<i>Soph.</i> <i>n</i> = 2974	<i>Sr.</i>	<i>Soph.</i> <i>n</i> = 3960	<i>Sr.</i>	<i>Soph.</i> <i>n</i> = 3112	<i>Sr.</i>
Vocabulary	-.241	-.220	-.076	.121	-.037	-.094
Reading	-.226	-.174	-.064	-.089	-.064	-.086
Math level 1	-.211	-.204	-.105	-.122	-.084	-.109
Math level 2	-.171	-.175	-.097	-.110	-.073	-.113
Grades	-.189	-.148	-.080	-.089	-.051	-.074
<i>Media Use and Achievement—All Students</i>						
<i>Achievement Measure</i>	<i>Viewing Television</i>		<i>Reading for Pleasure</i>		<i>Reading Newspaper</i>	
	<i>Soph.</i> <i>n</i> = 5074	<i>Sr.</i>	<i>Soph.</i> <i>n</i> = 5074	<i>Sr.</i>	<i>Soph.</i> <i>n</i> = 5074	<i>Sr.</i>
Vocabulary	-.158	-.176	.228	.266	.164	.147
Reading	-.160	-.155	.245	.269	.136	.135
Math level 1	-.173	-.188	.155	.160	.128	.112
Math level 2	-.157	-.169	.136	.126	.083	.094
Grades	-.128	-.127	.173	.133	.133	.115

^a Smallest significant correlation (one-tailed alpha = .05, corrected for design effect) for all students is .032, for blacks .047, for females .032, for high resource group .042, medium resource group .036, and for low resource group .041. Calculated using Fisher's *r* to *Z* transformation.

group. In addition, the negative correlations for females would replicate the finding for all students, and the insignificant correlations for blacks would appear to confirm that those relatively deprived educationally are less "harmed" by television viewing.

The potentially misleading nature of purely correlational data is indicated by the results of a more appropriate analysis. As Table 2 indicates, the cross-lagged, standardized partial regression coefficients (controlling for a range of exogenous demographic, social, and educational characteristics as well as earlier levels of the various measures of achievement, media use, and educational activities) provide little support for the hypothesis that television is generally detrimental in the sense that its use directly reduces achievement growth. Although there

Table 2. Cross-lagged Coefficients—Television as Independent Variable (Including All Control Variables)^a

<i>Dependent Variable</i>	<i>All students Beta n = 5074</i>	<i>Blacks Beta n = 2365</i>	<i>Females Beta n = 4997</i>
Vocabulary achievement	-.004	.015	-.004
Reading achievement	-.001	.006	.006
Mathematics level 1	-.012	.012	-.014
Mathematics level 2	-.009	-.017	-.017
Grades	-.008	-.008	-.003

^a In addition to the variables listed above, each cross-lagged regression equation includes: sex, race, hispanicity, private school attendance, academic program, father's and mother's education, number of siblings and parents at home, family income, educational possessions (5 measures), homework (two measures), absenteeism and tardiness, frequency of reading for pleasure and the front page of the newspaper. Race and sex excluded in the respective subgroup regressions.

All underlined coefficients are significant at .05 (one-tailed corrected for design effect).

is a relatively consistent pattern of negative coefficients for both the total sample and for females, the estimated "effects" are small and in no case statistically significant. The estimates for blacks are mixed between small negative and positive coefficients.

Similarly, Table 3 provides no support for the hypothesis that the negative effect of television increases with the level of educational resources. If anything, the pattern suggests the opposite, but note that none of the differences between coefficients are statistically significant.

Table 3. Cross-lagged Coefficients—Television as Independent Variable. Sample Divided by Level of Educational Resources (Including All Control Variables)^a

<i>Dependent Variable</i>	<i>High Resource Beta n = 2974</i>	<i>Medium Resource Beta n = 3960</i>	<i>Low Resource Beta n = 3112</i>
Vocabulary achievement	-.001	.023	-.012
Reading achievement	.011	.015	-.013
Mathematics level 1	.000	.000	-.004
Mathematics level 2	-.014	-.017	-.022
Grades	-.002	-.009	-.013

^a In addition to the variables listed above, each cross-lagged regression equation includes: sex, race, hispanicity, private school attendance, academic program, father's and mother's education, number of siblings and parents at home, family income, educational possessions (5 measures), homework (two measures), absenteeism and tardiness, frequency of reading for pleasure and the front page of the newspaper.

All underlined coefficients are significant at .05 (one-tailed, corrected for design effect).

Also, the only significant coefficient is one for the medium resource group and it is positive. Again, although the majority of coefficients are negative, no support for the first hypothesis can be adduced since none of the negative coefficients is statistically significant. A replication of this test, comparing blacks (considering them as a relatively deprived subgroup) to the total population, again provides little support for the displacement hypothesis (see Table 2).

A comparison of TV viewing, reading for pleasure, and reading the front page of the newspaper, however, does indicate that reading for pleasure is positively related to reading and vocabulary achievement (see Table 4). Further, the differences between reading for pleasure and TV viewing, and between reading for pleasure and reading the front page of the newspaper, are statistically significant. This suggests that viewing television and reading the front page of the paper are relatively unbeneficial when compared to reading for pleasure.

The hypothesized negative effect of achievement on television viewing is only marginally supported. Even though four out of five coefficients are negative only one is statistically significant (see the bottom half of Table 4). The hypothesized positive impact of achievement on print use receives fairly clear support, at least for the types of achievement most closely related to reading. Vocabulary achievement appears to influence both reading for pleasure and reading the front page of the newspaper, and reading achievement to significantly influence reading for pleasure. The significant negative coefficient for the influence of math level one on reading for pleasure seems somewhat incongruous, but consider that this estimate is after controlling for the other achievement measures which are all highly, positively related.

Discussion

There are two major sources of explanation for the diminished negative relationship between television and academic achievement: reverse causation and "third variables." The bottom half of Table 4 (and similar results for the subgroups) suggests that part of this diminution is due to the effect of achievement on the selection of television. Although these "reverse" effects are neither large nor consistently significant, they are generally negative and larger than the effects from TV to achievement.

The greater part of the observed correlation appears to be due to the effect of "third variables," which is to say, variables apparently external to the relationship between television and achievement. That is, differences in such personal and social characteristics as race, sex, parental education, educational resources, and intelligence (implicitly

Table 4. Cross-lagged Coefficients (Total Sample Including All Control Variables)^a

Dependent Variable	Media Use as Independent Variables		
	Viewing Television Beta	Reading for Pleasure Beta	Reading Newspaper Beta
Vocabulary achievement	-.004	<u>.047</u>	.011
Reading achievement	-.001	<u>.082</u>	.008
Mathematics level 1	-.012	.003	-.006
Mathematics level 2	-.009	<u>.004</u>	-.010
Grades	-.008	-.011	<u>.014</u>

Independent Variable	Media Use as Dependent Variables		
	Viewing Television Beta	Reading for Pleasure Beta	Reading Newspaper Beta
Vocabulary achievement	.005	<u>.124</u>	<u>.067</u>
Reading achievement	-.026	<u>.055</u>	-.008
Mathematics level 1	-.058	-.049	-.038
Mathematics level 2	-.023	.008	-.032
Grades	-.016	-.021	<u>.049</u>

NOTE: For all equations $n = .5074$.

^a In addition to the variables listed above, each cross-lagged regression equation includes: sex, race, hispanicity, private school attendance, academic program, father's and mother's education, number of siblings and parents at home, family income, educational possessions (5 measures), homework (two measures), absenteeism and tardiness.

All underlined coefficients are significant at .05 (one-tailed, corrected for design effect).

measured by earlier achievement test scores) may influence both television viewing and achievement, creating an appearance of a substantial causal relationship that does not hold under closer analysis.

Several cautions are in order regarding the conclusions that may be drawn from these estimates. While the fairly consistent failure to obtain statistically significant effects does mean that the null hypothesis of no effects cannot be rejected, it does not mean that it demonstrates that television has no effect on achievement. Clearly, it casts doubt on previous studies which found evidence of negative effects on American high school students but used fewer controls or less adequate methods. Just as clearly, it does not refute the evidence of other studies which

also found evidence of negative effects on other populations and used alternative methods of equal or greater validity, for example, Gadberry's (1980) field experiment with first graders or Hornik's (1978) quasi-experimental investigation in El Salvador.

Even in the presence of statistical significance, these findings might be considered evidence that television has no socially significant impact because of the minute size of the estimated effects. Given the number of conservative biases built into the statistical procedures used in the study, especially the assumption of perfect measurement and a procedure that in effect uses change scores (see Kessler and Greenberg, 1981:141), a more reasonable approach is to compare effects within the study before passing such a judgment.

One logical basis for comparison is the set of estimates for other media activities, such as reading for pleasure or reading the front page of the newspaper, and "obvious" sources of academic effects such as high school program, private school attendance, and time spent on homework. The estimated effect of TV (measured by betas averaged across the four achievement tests for the total sample) does turn out to be the only negative estimate ($-.007$), but is not radically different in absolute value from the other estimates: reading the newspaper ($.001$), private school attendance ($.019$), homework time ($.021$), reading for pleasure ($.034$), and being in an academic program ($.042$). A comparison across an average of the effects on the two verbal measures, vocabulary and reading comprehension, offers a similar picture: TV ($-.003$), newspaper ($.010$), private school ($.031$), homework ($.014$), reading for pleasure ($.065$), and academic program ($.041$).

Clearly, television does not fare well in these comparisons—and the size of all of the estimates suggests caution in defining a meaningful effect in absolute terms. But even if the major suggestion of this study does hold, that is, that television viewing has no measurable effect on achievement, this is considerably less than a glowing endorsement of television as an instrument of education. In comparison to reading for pleasure, for example, television appears clearly less effective.

To whatever degree this study supports the hypothesis that television has no negative effect on achievement, it even more clearly supports the hypothesis that it offers no benefit. In other words, it suggests that the thousand hours a year high school students invest in television are, as Comstock (1982:1154) put it, "scholastically unproductive."

IMPLICATIONS FOR FUTURE RESEARCH

The major shortcoming of this study is the measure of television viewing. As the authors of a recent study (Roberts et al., 1984) point out, operationalizing television viewing only in terms of gross amount

ignores many aspects of the phenomenon, including involvement, social context, and the content of what is viewed. While a global measure of viewing such as was used in this study does address the significant question of the overall impact of television, that is, viewing cumulated across levels of involvement, varieties of social contexts, and types of content, it does not address many more specific ones. When possible, future studies should.

Even if television has, in the aggregate, no measurable effect, it would be both socially and theoretically meaningful to know whether this is because regardless of how, where, or what is viewed there are no effects, or because counterbalancing effects tend to neutralize each other. For example, is the relative benefit of those who watch to learn offset by the relative loss of those who watch to escape? Or is the positive effect of viewing news, public affairs, and science programming balanced out by the negative effects of entertainment programming?

Even though at the social level, the net effect is the same regardless of the answers to these questions, a fuller understanding of the processes by which media influence cognitive development clearly depends upon their careful investigation. Such an understanding may serve us well as we enter an age with a continually changing array of new hopes and fears concerning the latest addition to the panoply of new communications technologies.

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Education and the Quality of Life in Korea and the United States: A Cross-Cultural Perspective

DOH C. SHINN

Men possess a moral nature; but if they are well fed, warmly clad, and comfortably lodged, without being taught at the same time, they become almost like the beasts.

—MENCIUS

IN RECENT YEARS, an increasing number of social scientists in the United States and elsewhere have made serious efforts to determine whether or not more education contributes to the quality of people's lives (Andrews, 1985; Andrews and Withey, 1976; Atkinson, 1978; Campbell et al., 1976; Campbell, 1981; Gallup, 1976; Glenn and Weaver, 1981; Headey, 1981; Inglehart, 1977; Inglehart and Rabier, 1985; Rabier, 1974; Veroff et al., 1981). Unfortunately, these research efforts have

Abstract The search reported in this article analyzed two sets of national sample survey data recently collected from the United States and the Republic of Korea, and sought to compare the influence of educational attainment on the perception of life quality in these two countries. Results of this comparison indicate that education contributes a lot more to the psychological quality of life in Korea than in America. Two explanations were offered for the different roles which educational attainment plays in the two countries.

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been confined to advanced industrialized societies in Western Europe and North America; very little systematic research has been conducted to compare the effects of education on psychological well-being across culturally and economically divergent types of societies.

The present study seeks to fill this void in the psychological study of life quality by analyzing two sets of national sample survey data recently collected from the Republic of Korea and the United States. Unquestionably, America represents one of the most affluent and educationally advanced countries in the West. Korea, on the other hand, is one of the most rapidly developing, nonwestern countries of the Third World. More important, Korean and American societies have long been shaped by different cultures, Confucianism and Christianity. These differences in their economic wealth, educational attainment, and cultural heritage provide an interesting opportunity to explore the dynamics of education in the psychological world of human well-being.

Does more education help people in America and Korea to live happier, more pleasant, more satisfying, and more successful lives? Or does educational attainment increase aspirations and expectations so much that it makes it more difficult to experience life as "better"? In which of these two countries does education have stronger and more pervasive effects on psychological well-being, and why?

Conceptualization and Measurement

The concept of quality of life has been defined and measured in many different ways. McCall (1975), for example, viewed it as a life of happiness (see also Shinn and Johnson, 1976). Other scholars have equated life quality with a sense of satisfaction (Atkinson, 1978; Campbell et al., 1976). Still others have related it to the extent to which life goals are accomplished (Hankiss, 1980; Milbrath, 1982). Undoubtedly, such unidimensional approaches to the concept of life quality portray a partial picture of the quality of life perceived by people themselves.

This study measures quality of life in terms of four widely known elements of the good life: happiness, enjoyment, satisfaction, and accomplishment (von Wright, 1972). Happiness and enjoyment represent the hedonic dimension of the good of man, while satisfaction and accomplishment constitute its welfare dimension. By considering at least these two dimensions of life quality, we are attempting to make a more comprehensive and balanced analysis of education's effects on it.

In measuring educational attainment, the present study focuses on learning experience in public and private schools. Unquestionably, there are important differences in what Korean and American schools teach and how they teach their students. Yet, these differences are

minor compared to those between other types of educational institutions in the two societies. The Korean school system since World War II has been modeled after the American system. Both systems require six years of schooling in elementary education, another six years in high school education, four years in college education, and at least two years in postgraduate training. In view of the parallels, we measure educational attainment in terms of six mutually exclusive categories ranging from no formal school to college graduation.

Two sets of personal and environmental characteristics are controlled for statistically in order to estimate the independent effects of education on the subjective quality of life accurately. The first set includes gender, age, marital status, and family income. The second set features the types of housing and community in which Korean and American respondents live.

The variable of gender is dichotomized into male and female. Marital status was also dichotomized into married and the unmarried by collapsing those widowed and divorced into the unmarried category. Family income is divided into quintiles. Age was aggregated into five categories: 18-29, 30-39, 40-49, 50-59, and 60 and older. The variable of housing is measured on the basis of whether a unit was owned by its residents or not. Community is measured on an ordinal scale based on the size of its population. The scale includes three categories: large metropolitan areas with populations of over 500,000, medium and small-size cities with populations of 25,000 to 500,000, rural towns and isolated villages.

Data Collection and Analysis

Basic data for the present study came from two nationwide sample surveys on the quality of life, which were carried out separately in two different periods of time. The first survey was conducted by the Institute of Social Sciences at Seoul National University during the summer of 1980 (Shinn et al., 1982). The second was conducted by the Survey Research Center at the University of Michigan during the summer of 1978, two years before the Korean survey. Besides this difference in the timing of field work, the number of households chosen for personal interviews differed considerably between the surveys. The sample size was 1215 for the Korean survey and 3642 for the American survey. This difference in sample size made it impossible to carry out many interesting comparisons of the various subgroups of the two populations. The two samples, however, are sufficiently representative to explore systematically cross-cultural differences in the influences of education on psychological well-being.

Included in both surveys were more than 60 comparable items on perceptions of well-being and ill-being, education and many other personal and environmental characteristics. Of these items, we selected four questions designed to tap the general feelings of well-being and seven items dealing with education and other relevant characteristics of respondents.

In measuring a general sense of satisfaction, both surveys used the same 7-point rating scale, which ranged from complete dissatisfaction to complete satisfaction. As a measure of life enjoyment, they also asked respondents the same question, "How much do you enjoy your life these days—a great deal, a fair amount, not very much, or not at all?" In measuring the extent to which happiness was experienced and life goals were accomplished, the Korean survey offered more response categories than the American survey had done earlier.

In an attempt to minimize the possible effects that these differences in question wording may have had on the reported levels of well-being, we first collapsed the answers of all respondents into the positive and negative categories. For each of four general items on life quality, we then computed the proportions of Koreans and Americans who gave positive answers. Finally, for each sample we computed the average number of positive answers and the proportion who answered all four questions positively. The mean scores of positive replies were used to compare the overall levels of life quality experienced by the adult populations of the two countries.

Four individual and two composite measures of life quality were cross-classified with levels of educational attainment. This bivariate analysis highlights the magnitude of differences between the more and less educated of the two populations in their experiences of well-being. In addition, multiple classification analysis (MCA) was performed on the same measures in order to estimate the independent effects of education on well-being and its relative importance as a source of subjective quality of life. Unlike other techniques of multivariate analysis, MCA is capable of estimating the value of the dependent variable for each category of independent variable after the adjustment of all other explanatory variables in the equation (Andrews et al., 1973).

Findings

Table 1 presents the percentages of Korean and American respondents who replied that they were happy, that they enjoy their lives, that they were satisfied with their lives, and that they had accomplished what they wanted in their lives, categorized by level of educational

Table 1. Percent of American and Korean Respondents Expressing Feelings of Well-Being, by Educational Attainment

<i>Measures of Well-Being</i>	<i>Educational Attainment Levels</i>						
	<i>No School</i>	<i>Elementary School</i>	<i>Middle School</i>	<i>High School</i>	<i>Some College</i>	<i>College Grad</i>	<i>Entire Sample</i>
America							
Happiness	— ^a	85%	87%	91%	95%	92%	91%
Enjoyment	—	73	76	85	88	89	84
Satisfaction	—	75	77	80	84	85	81
Accomplishment	—	87	88	85	87	89	86
All four	—	32	38	43	43	45	41
(N)		(178)	(533)	(364)	(875)	(371)	(3456)
Korea							
Happiness	42%	54%	55%	58%	63%	75%	57%
Enjoyment	38	48	54	51	50	65	51
Satisfaction	14	32	44	50	51	65	43
Accomplishment	22	32	28	30	41	51	32
All four	5	11	12	15	21	33	15
(N)	(88)	(292)	(246)	(364)	(92)	(104)	(1092)

^a Not enough cases.

attainment. On every measure of well-being, Korean adults are shown in the table to rate their lives far less positively than Americans.

Comparing the ratings of individual measures, we see that the size of Korean adult population expressing positive feelings is from 31 percent to 54 percent smaller than that for the American adult population. Comparing the ratings of composite measure reported in the same table, we find that Korean people, as compared to their American counterparts, are two and a half times less likely to experience all the feelings of happiness, enjoyment, satisfaction, and accomplishment (15 versus 41 percent). Such wide differences in the general level of well-being expressed by the two populations are not surprising in view of the economic, political, and other environmental conditions in which they live.

It is surprising that general levels of well-being vary across educational categories a great deal more in Korea than in America. In America, college graduates are found to express positive feelings about their lives from 2 to 16 percent more than those whose education ended in elementary school. In Korea, however, the differences between the same educational groups run from 12 to 33 percent. Judged by the percentage expressing all four feelings of well-being, college graduates in America appear to be better off less than one-half the time when compared to their counterparts with just an elementary level of education (45 percent versus 32 percent). In Korea, on the other hand, college degree holders are found to be three times better off psychologically than those with only an elementary education (33 percent versus

11 percent). It appears that a life of well-being has more to do with educational attainment in Korea than in America.

To estimate educational differences in the experiences of well-being more accurately, statistical adjustments were made for the effects of six control variables on those experiences. Table 2 reports levels of well-being for six educational categories after the original scores were adjusted to compensate for differences in family income, gender, age, marital status, housing, and community. As expected, educational differences were reduced considerably in both samples. The average rates of such reduction, however, are found to be far greater for the American sample than for the Korean sample. This indicates that income and five other personal and environmental characteristics exert a relatively more powerful influence on the quality of life in America than in Korea.

From Table 2, we can see that American respondents' adjusted scores of well-being vary little from one educational category to another on the measures of happiness, satisfaction, and accomplishment. Only in the assessment of life enjoyment do we observe a statistically significant difference (12 percentage points between the two extreme categories of educational attainment). Between Korean respondents in the same categories, however, the differences run from 22 to 44 percent, and these differences are all found to be statistically significant and substantively meaningful. One obvious conclusion from this

Table 2. Educational Differences in the Adjusted Scores of Well-Being for American and Korean Respondents

Measures of Well-Being	Educational Attainment Levels						Difference (F - D)
	No School (A)	Elementary School (B)	Middle School (C)	High School (D)	Some College (E)	College Grad (F)	
America							
Happiness	— ^a	89%	89%	91%	94%	91%	0%
Enjoyment	—	76	77	85	87	88	3
Satisfaction	—	79	80	80	83	84	4
Accomplishment	—	89	88	85	85	89	4
All four	—	33	38	42	42	44	2
(N)		(178)	(533)	(364)	(875)	(371)	(3456)
Korea							
Happiness	48%	54%	55%	58%	63%	70%	22%
Enjoyment	40	48	54	51	49	62	11
Satisfaction	17	34	45	48	48	61	13
Accomplishment	25	32	28	30	39	47	17
All four	3	11	12	16	22	33	17
(N)	(88)	(292)	(246)	(364)	(92)	(104)	(1092)

^a Not enough cases.

finding is that, with more education, Koreans experience a much better quality of life than their American counterparts do.

The differences in the role which education plays in Korean and American societies become clearer when we compare the adjusted ratings of two composite measures. The number of positive feelings expressed by Korean respondents varies a great deal from 1.2 for those with no formal schooling to 2.6 for those with college degrees even when their family income and other important characteristics were statistically controlled. Among American respondents, in sharp contrast, the same measure is found to vary only by 0.2, from 3.0 to 3.2, a variation which is hardly meaningful at all. According to the adjusted ratings of the percentage scale, Koreans with college degrees are 11 times more likely to experience a life of happiness, enjoyment, satisfaction, and accomplishment than those with no formal education (33 versus 3 percent). College graduates in America, on the other hand, are only slightly more likely to experience it than the least educated (44 versus 33 percent). On the basis of these findings, one can reasonably argue that education contributes far more to the quality of life in Korea than in America.

The greatest difference attributable to education in the two countries appears to be in the way college graduation affects the perceptions of life quality. To estimate the net effect of a college degree on life quality, we subtracted the adjusted scores of the high school educated from those of college degree holders in each country. Among those in the Korean sample, over two times as many college graduates as the high school educated reported that they were living a life of happiness, enjoyment, satisfaction, and accomplishment (33 versus 16 percent). The margin of this difference for the American sample was no more than 2 percent (42 to 44 percent). On the whole, the possession of a college degree appears to be far more essential to the experience of life quality in Korea than in America.

All the evidence presented above indicates strongly that education is a more powerful and positive influence on the psychological quality of life in Korea than in America. The next logical question is this: How much more powerful an influence and how many more positive effects does educational attainment have on the quality of life when contrasting Korea with America? To answer this question, we performed multiple regression analyses on the overall measure, which summed up the number of positive answers to four questions on well-being. Table 3 reports simple correlation coefficients, regression coefficients, and standardized regression coefficients (beta) for education and six other explanatory variables.

Table 3. Relative Importance of Education as a Source of the Perceived Quality of Life in America and Korea

Explanatory Variables	Simple Correlation Coefficients		Regression Coefficients			
	America	Korea	Unstandardized		Standardized	
			America	Korea	America	Korea
Education	.10*	.22*	.07*	.16*	.07*	.17*
Income	.26*	.28*	.07*	.26*	.10*	.25*
Age	-.02*	-.06*	.01	-.04	.06	-.08
Gender	.05	.01	.05	-.09	.03	-.03
Marriage	.14*	.06	.16*	.43*	.09*	.12
Housing	.13*	.12*	.14*	.22*	.07*	.07*
Community	.09*	-.04	.07*	-.22*	.06*	-.15*

* $p < .05$.

A comparison of regression coefficients across the columns of the table reveals that one unit increase in educational attainment alone would improve the quality of life among Koreans by a unit of 0.17. Among American people, on the other hand, the same unit of change in educational attainment would raise their life quality by a unit of 0.07. This means that education shapes the psychological quality of life in Korea two and a half times more powerfully and positively than in America.

Comparing betas across the rows of the table, we are able to identify the relative importance of education as a source of life quality in each country. In both countries, we see that income ranks first among all seven variables in terms of the value of the beta statistic. For Americans as well as Koreans, income appears to be the most important determinant of their life quality. This finding is hardly surprising in view of the widely known fact that monetary resources nowadays not only fulfill survival needs but also purchase personal pleasure, power, prestige, and status.

The most surprising result of this comparison is that education ranks differently as a source of life quality in the two countries. In Korea, education ranks second, right after family income. In America, however, education ranks fourth, after marital status and place of residence. Indeed, education as a source of life quality occupies a far more important place in Korea than in America. More investments in education may not contribute much to public well-being in America, but such investments appear to be essential to the building of a nation of well-being in Korea.

Discussion

Having found the significant differences in the way education influences the psychological quality of life in Korea and America, we now need to explore the reasons for these differences. Obviously, one of these reasons has to do with differences in the extent to which education is emphasized as a life goal in the two countries. People in Korea, like the Chinese and Japanese, whose culture has been dominated by Confucian ethics, still believe strongly that a good quality of life cannot be attained without higher education (Dawson, 1942: chaps. 1-2). For this reason, children in these countries even attempt to terminate their precious lives when they fail to be admitted to the school of their choice. For the same reason, newly arrived Asian-Americans are represented far beyond their population share at virtually every top-ranking university in this country. Despite their minority status, they are also known for achieving higher socioeconomic levels than the white majority (Hirschman and Wong, 1984).

A great deal of difference also exists between Korea and America in the way education is associated with other tangible resources known to be necessary for a good quality of life. In the two countries, family income is distributed far more closely in line with levels of education in Korea. According to the percentage statistics reported in Figure 1, the probability that college graduates become a member of the highest income group in their society is more than two and a half times greater

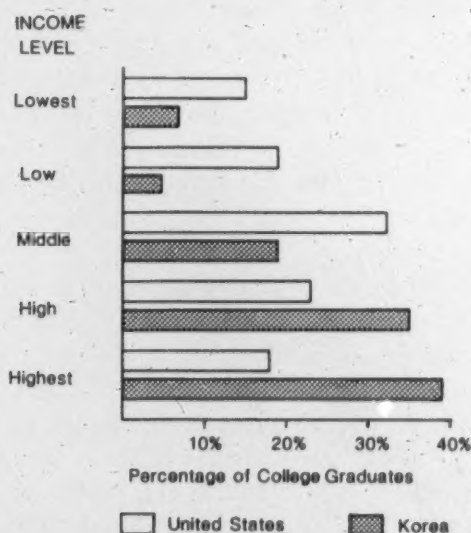


Figure 1. Percentage of U.S. and Korean Respondents with a College Degree in Five Levels of Income

in Korea than in America (40 versus 17 percent). Therefore, college graduation itself will be psychologically more significant to Koreans than Americans. This may be another reason why education serves as a more powerful and positive force influencing the quality of life in Korea than in America.

Conclusions

Education is thought to be an important means by which we add to our quality of life. Each year, millions of people, both in developing and developed countries, search for more and better educational opportunities in public or private schools. In prior research, however, few efforts have been made to compare the effects of educational achievement on the perception of quality of life across countries whose economies and cultures are at variance. The research reported here analyzed two sets of national sample survey data collected from the Republic of Korea and the United States, and sought to assess and explain the dynamic roles which educational attainment plays in psychological well-being. All the findings documented above indicate strongly that education contributes a lot more to the public's well-being in Korea, where the Confucian concept of self-development through education is still widely shared:

Those who are born with the possession of knowledge are the highest class of men. Those who learn and so acquire knowledge are the next. Those who are dull and stupid, and yet compass the learning, are another class next to these. As to those who are dull and stupid and yet do not learn, they are the lowest of the people (Confucious, *Analects*, Book XVI, C. IX).

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Response Effects in the Electronic Survey

SARA KIESLER AND LEE S. SPROULL

IN ALL SCIENTIFIC ENDEAVOR the available tools affect the questions one can ask and the data one can collect. In this report, we examine a new tool in survey research, the electronic or computer-mediated survey. In the last two decades, electronic computers have come to figure in many phases of survey research—instrument design, sampling, monitoring of work in the field, coding and editing, data entry, data cleaning, scale and index construction, data base organization, data base retrieval, statistical analysis, documentation, and report writing (Kar-

Abstract This report examines the electronic survey as a research tool. In an electronic survey, respondents use a text processing program to self-administer a computer-based questionnaire. As more people have access to computers, electronic surveys may become widespread. The electronic survey can reduce processing costs because it automates the transformation of raw data into computer-readable form. It can combine advantages of interviews (e.g., prompts, complex branching) with those of paper mail surveys (e.g., standardization, anonymity). An important issue is how the electronic survey affects the responses of people who use it. We conducted an experimental sample survey on health attitudes, behaviors, and personal traits using two forms of administration: electronic and paper mail. Closed-end responses in the electronic survey were less socially desirable and tended to be more extreme than were responses in the paper survey. Open-ended responses that could be edited by respondents were relatively long and disclosing. These findings are consistent with other research on computer-mediated communication, raising general issues about using computers to collect self-report data.

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weit and Meyers, 1983:379-414). Still, the full application of computers to survey research is limited by the fact that raw survey data are collected off-line. The technology in common use that most closely approximates the electronic survey is computer-assisted telephone interviewing (CATI). In CATI, the interviewer types oral responses directly into the computer, which improves the efficiency of data collection over oral-response-to-paper-to-computer methods. However, in CATI, a person (the interviewer-recorder) stands between the respondent's behavior and the data that are analyzed. By contrast, in an electronic survey respondents at computer terminals or microcomputers enter their own data directly into the computer.

The sampling frame of the electronic survey is restricted to members of organizations and populations who have access to computers and to people who feel comfortable using them. Until such time as computers and networks spread throughout society, the electronic survey will probably be infeasible for general surveys. More limited applications, however, are increasingly appropriate. Greist and Klein and their colleagues have used free-standing microcomputers to collect diagnostic information directly from psychiatric patients (e.g., Greist et al., 1973). Researchers could use free-standing or portable computers in shopping centers and convention centers to carry out market studies, in military bases and firms to carry out personnel research, and in schools and government agencies to carry out program evaluations. The data collected on small computers can be transferred by telephone to any central data processing source.

When people are linked by a computer network, the electronic survey can be administered to any person having access to the network or to a connected network. Kraut (1984) used a computer network in an international corporation to conduct research on work behaviors and attitudes. Sproull (1985) used computer mail in a Fortune 500 firm to study organizational communication. Computer networks add value to the electronic survey because these systems locate respondents automatically, deliver survey instruments to remote locations (wherever respondents have access to the network), and permit respondents to answer questions at their own convenience. Computer networks also make feasible automatic event-driven surveys, for example, a consumer survey keyed automatically to particular purchases by shoppers who are using electronic catalogs.

If only because it seems to reduce research costs, the electronic survey may become widespread. Once respondents have access to a computer or to a network, relatively lower marginal costs of collecting and communicating data electronically can be substituted for the substantial costs of interviewing, telephoning, and sending questionnaires

through the mail. In addition, 20–40 percent of the total computing costs of conducting a survey may derive from transforming data collected off-line into a form which can be processed by the computer (Ferrara and Nolan, 1974:27). The electronic survey eliminates the need for a person (such as a transcriber) or a technology (such as an optical character reader) to stand between respondents and the computer that stores and analyzes their data. Some open-ended material would still have to be hand-coded, but even this task could be aided by computerized text search and text categorizing programs. Another potential advantage of the electronic survey is that the instrument can be standardized easily, as is true of a paper questionnaire. But as with the telephone or face-to-face interview, the instrument is highly flexible. It may have any style, formal or informal. It can include explanatory material, prompts, error corrections, menus, branches, and skips. Because of this flexibility, the electronic survey is potentially adaptable to many kinds of research including organizational case studies, political polls, attitude surveys, experiments, and evaluations.

Assessing Survey Utility

Apart from any economic advantages, the utility of the electronic survey will depend on its comparability to other methods of survey administration. This comparability is not obvious because the electronic survey both shares characteristics of various other methods and has some unique features of its own. One way to approach this issue is through a comparison of nonsampling errors, that is, of variations from theoretically true survey responses. After Bradburn (1983:289) and others, we will refer to these errors as “response effects.”¹

Every survey administration introduces or exacerbates response effects (DeLamater, 1982:37). These include respondents’ systematically refusing to answer certain questions, or giving incomplete answers or not following instructions, underreporting socially undesirable or threatening information, overreporting socially desirable information, choosing conventional or “moderate” response categories, and “yea-saying”—agreeing with whatever the researcher asserts. Face-to-face and telephone interviews increase respondents’ desire to please over self-administered paper questionnaires. Hence interviews increase the quantity of responses and detail in reports of behavior; they also increase overreporting of socially desirable attributes or attitudes (for a

¹ We use the term *response effects* because we did not compare subjective responses with objective data and therefore cannot establish the degree of nonsampling error in the strict sense of that term. We recognize that this expediency avoids deeper measurement issues surrounding the nature of true subjective information.

secondary analysis and review, see Sudman and Bradburn, 1974). Self-administered questionnaires are relatively anonymous and tend to reduce respondents' concern over presenting themselves in a good light. Hence self-administered questionnaires reduce total reporting and accuracy but increase reporting of negative information and attitudes (e.g., Kahn, 1952; Hochstim, 1967).

Because the essence of both an electronic survey and the self-administered paper questionnaire is answering questions presented via printed text, we expect responses to an electronic survey to be much like responses to a paper survey. However, like the telephone and face-to-face interview, the electronic survey is interactive. Interactive features such as prompts might increase respondents' perceived control and attention, with the result of increasing their involvement beyond that evoked by a paper questionnaire.

The electronic survey is also unique because of the degree to which it lacks social context information. All survey administration methods, because they standardize interaction, reduce social context information beyond that which we gather in most interactions in everyday life. Mail surveys reduce social context information more than telephone surveys do, telephone surveys more than face-to-face interviews. However, electronic surveys, because they lack even the social artifacts embodied in letterheads, postal rate markings, and print formats reduce social context information most of all.² Research suggests that reduced social context information in the electronic survey will make the research setting impersonal and anonymous, and that respondents will become self-centered, and relatively unconcerned with social norms and with the impression they give others (e.g., Short et al., 1976; Kiesler et al., 1984).

Economic considerations will probably make electronic surveys popular for some kinds of survey research. On the basis of our ideas about technologically induced shifts of attention and reduced social context information, we predict specific differences in response effects for the electronic survey in comparison with the paper mail survey. The remainder of this report presents the results of our first experiment.

Method

During the fall of 1983, we conducted an experiment to compare responses in the electronic survey with those in an equivalent paper

² The social quality of electronic communication is not simply a matter of narrow bandwidth. Developers of computer communication programs and text editors deliberately design these programs to maximize flexibility and freedom from the social constraints embodied in other methods of communication.

survey. On the basis of the reasoning described above, we formulated two sets of working hypotheses about relative response rates and response effects.

Absorption/attention effects:

Respondents in an electronic survey will complete more items and will complete them with fewer mistakes than will respondents in a paper survey.

Respondents in an electronic survey will give longer answers to open-ended questions than will respondents in a paper survey.

Respondents in an electronic survey will talk more about themselves than will respondents in a paper survey.

Lack of social context information effects:

Respondents in an electronic survey will less frequently choose "agree" responses and middle responses in Likert scales than will respondents in a paper survey.

Respondents in an electronic survey will admit to more socially undesirable behavior, and they will report more personal traits and feelings, than will respondents in a paper survey.

SETTING

This research was conducted at Carnegie-Mellon University, a private university enrolling 6100 students. Students and employees have wide access to computers; more than 85 percent of the students have a computing account. Every liberal arts student is required to take an introductory programming course (usually PASCAL) and many other courses make use of the computer. The most frequently used computer programs, in and out of classes, are the communication and text-editing programs run on a network of time-sharing computers (Blackwell, 1984). Hence, the experiment was conducted in a relatively computer-intensive environment, where many people use computers to communicate text.

SAMPLE SELECTION AND STUDY PROCEDURES

On the basis of a pilot study we conducted in spring 1983, we decided to sample from the population of recently active computer mail users. On each of three days and on each of eight computers, we ran a system program that lists all currently logged-in users and the name of the program they are running. (At any given time, about one in six users are running a mail program.) We also invoked a system command to

list every person who has a visible mail file, along with the date and time it was last used. From the first 300 computer mail users identified by these methods, we randomly selected 76 students and 75 faculty/staff employees. This resulted in a sample roughly proportionate to the distribution of employees and students across colleges and administrative units, with a small oversampling of employees in Computer Science, Robotics, and the Computation Center (18.7 percent versus 14.8 percent in the university as a whole).

We sent each person in the sample a letter inviting him or her to participate in a research project on electronic surveys. The invitation explained that the respondent would receive either a hard-copy or an on-line version of a questionnaire drawn from current social science projects. It also promised that respondents' data would be anonymous and would be used for statistical purposes only. Follow-up telephone calls were made to the group to ask verbal permission to proceed with the survey. Overall, 93 percent received the invitation (141/151) and 71 percent of the group that received the invitation (100/141) agreed to participate and actually returned the questionnaire.

SURVEY INSTRUMENT

The survey instrument we used was a simple 18-item self-administered questionnaire on health and personal characteristics. Fifteen of the items were closed-ended: five questions were used to group respondents by gender, organizational position, and computer use; five 7-point Likert scales on attitudes about health (e.g., "There is nothing more important than good health") were used to measure yea-saying and extreme responses; five true-false questions from the Marlowe-Crowne (1964) Need for Approval Scale were used to measure social desirability responses. Three of the items were open-ended: One asked the respondent to describe his or her most recent illness; one asked, "What are the habits and reactions of yours which bother you at present?" One asked, "What characteristics of yourself give you cause for pride and satisfaction?"

The paper survey was prepared with a high-quality laser printer. The electronic survey was a computer program which the respondent invoked at his or her terminal to display each question and prompt for answers. The program allowed respondents to retype any answer after they had finished the questionnaire, but it did not permit respondents to edit their answers as they completed the questionnaire.

When the respondent had completed the electronic questionnaire he or she returned it to a master storage directory on one computer. There, numerical identification codes were added automatically. Then the coded data (without names) were forwarded to a different computer

directory where data analyses were performed. This procedure protected the anonymity of respondents' data while also permitting us to contact respondents in the future by matching codes to mailing label information in the storage directory.

PRELIMINARY ANALYSES

Correlations among the dependent variables indicate that our primary measures were independent (r 's = .01-.03). There were some group effects—females wrote longer open-ended responses, and heavier computer users gave less socially desirable answers—but group variables did not interact with survey method effects.

Results

PARTICIPATION IN THE SURVEY

More respondents returned the paper survey than returned the electronic survey (75 percent vs. 67 percent). Still, the electronic response rates compare favorably with rates of 48–61 percent in conventional mail surveys (Heberlein and Baumgartner, 1978). Furthermore, the electronic survey was returned more quickly than was the paper survey (9.6 days vs. 10.8 days).

Overall, the survey respondents consisted of 84 percent male students and 54 percent male employees, which corresponds to 70 percent male students in the university as a whole and 57 percent male (noncustodial) employees in the university as a whole. Respondents reported spending 3.7 hours computing on a "typical" weekday (which is not very different from what was reported by the pilot study sample). Male and female respondents reported an equal number of hours for computer use. Gender and time spent using the computer did not affect response rates or response times.

ITEM COMPLETION

Respondents who answered the electronic survey made fewer item completion mistakes (e.g., writing an integer in response to a true-false question) on the closed-ended items than did respondents who answered the paper survey. Of the total of 53 items where a mistake had been made in answering a question (5.3 percent of the total possible correct), none was made by electronic survey respondents. Electronic survey respondents also left fewer items blank and refused to answer fewer questions than did paper survey respondents. Of the total of 20 missing or refused items, 8 came from electronic survey respondents. Overall, 22 percent of the paper survey respondents failed to complete

or spoiled one or more items, whereas only 10 percent failed to complete or spoiled one or more items in the electronic survey.

OPEN-ENDED ANSWERS

Total number of words, of personal pronouns, and of trait descriptions did not differ significantly between the electronic survey and the paper survey. Several respondents in the electronic survey condition sent us computer mail complaining about the absence of text editing capabilities in the electronic survey. Later in this report we describe some data relevant to editing of open-ended items.

RESPONSE SETS

We used the health attitude Likert scales to check two kinds of response set: the tendency to agree (yea-saying), and the tendency to avoid extreme answers, that is, to prefer the midpoints of scales. Since the format for each item was a 7-point scale where 1 = "agree" and 7 = "disagree," smaller mean scores indicate more yea-saying. To estimate moderation in responding, we subtracted 4 (the midpoint of the scale) from the respondent's answer; a smaller absolute difference indicates a less extreme answer. On the basis of an analysis of variance to measure the effects of survey method, position (staff or student), and item, we found no significant differences in yea-saying or extremity of response attributable to survey method.

SOCIAL DESIRABILITY EFFECTS

To measure the social desirability of responses we used items from the Need for Approval Scale (Marlowe and Crowne, 1964). Published norms suggest that most people answer in a socially desirable direction; in all cases this is a "true" response. Our data indicate that respondents who answered electronically gave less socially desirable responses than did respondents who answered on paper. Analysis of variance on the factors in Table 1 (survey method, position, and items) showed a significant main effect for survey method, $F(1,87) = 3.8$, $p < .05$, and no interactions.

EXTENSION

Four months after we completed the experimental survey, we mailed letters to the 100 respondents (using a mailing list generated from the storage directory) asking them to participate in an extension to the electronic survey study. Sixty-three people volunteered. One purpose of our follow-up was to explore the reliability of our findings by giving respondents the instrument they had not received previously. We did so with 33 of the volunteers; 20 of the (previous) electronic survey

Table 1. Percentage of Socially Desirable Responses

Item	Method of Administration			
	Students		Employees	
	Paper (n = 26)	Electronic (n = 25)	Paper (n = 25)	Electronic (n = 24)
I am always careful about my manner of dress.	50%	50%	52%	20%
I always try to practice what I preach.	75	67	79	72
When I don't know something I don't at all mind admitting it.	80	75	61	60
I would never think of letting someone else be punished for my wrongdoings.	90	92	87	57
I never resent being asked to return a favor.	74	63	74	59
Mean %	74%	69%	71%	54%

respondents completed the paper version, and 13 of the (previous) paper survey respondents completed the electronic version.

Although the number of respondents is small, we found differences similar to those we had observed earlier or even stronger in the predicted direction: (1) New electronic survey respondents were more cooperative than were new paper survey respondents (faster response time, more items completed, fewer mistakes in responding). (2) New electronic survey respondents were less likely to be "yea-sayers" ($F[1,24] = 4.1, p < .05$) and more likely to use extreme scale points than were paper survey respondents ($F[4,120] = 2.64, p < .05$). (3) New electronic survey respondents gave less socially desirable answers than did new paper survey respondents ($F[1,21] = 3.41, p < .08$).

Another purpose of our follow-up was to collect data on response effects in an open-ended instrument that could be edited freely by respondents. We sent 30 of the study extension volunteers the three open-ended items that had appeared in our experimental survey as electronic questions that could be freely edited. An example of one edited response follows:

I get excited too easily and sometimes get impatient with people and react too spontaneously when it would sometimes be better to "go with the flow." I also feel that I ought to give up alcohol, caffeine and smoking my pipe, he said as he took a puff.

There are also days when I feel that I push too hard, both myself and the people

who work for me. And I sometimes worry that I demand too much and don't encourage people enough.

Respondent-edited answers in the brief questionnaire were twice as long as were responses to the same items in the paper survey and more than three times as long as were responses in the standard electronic survey, $F(2,49) = 7.55, p < .01$. (The statistics reflect comparisons among all study extension volunteers.) Respondent-edited responses also were more self-centered, as measured by the number of first-person personal pronouns in relation to third-person personal pronouns, $F(2,49) = 3.52, p < .05$ (e.g., Davis and Brock, 1975). Finally, respondent-edited responses included more self-description, as measured by counting personal attributes and traits in the answers ($F[2,49] = 5.0, p < .01$). The standard electronic survey, however, elicited the most trait descriptions per words written.

Discussion

The population of interest for an electronic survey will be a community or organization with access to and familiarity with computers or computer networks. These groups will tend to be relatively well-educated, urban, white collar, and technologically sophisticated. Assuming the electronic survey is feasible with respect to this population, it seems to offer some advantages over a paper survey. The results of our experiment suggest that the electronic survey, at least one administered within an organized setting, can elicit good response rates with faster turnaround time and fewer item incompletions than a regular mail survey. Our survey was simple, but it need not have been. The electronic survey can be designed to handle any of many formats prohibited in self-administered paper surveys: open-ended questions requiring long answers, corrections, questions which screen and then branch to other questions, and questions which must be answered in certain sequences (Dillman, 1983:359, 369-370).

Our results show considerable similarity of response between the paper and electronic survey but not so much that the two may be considered interchangeable without further research. Even in our small sample we found more socially undesirable responses in the electronic survey than in the paper survey. In other research we have found that people tend to be both self-absorbed and uninhibited when they communicate using a computer (Kiesler et al., 1984). Sproull (1985) found that employees answering a questionnaire using electronic mail gave more extreme answers than employees who answered on a paper questionnaire. Within the context of response effects this work suggests a

caution and counterweight to economic factors that encourage the use of electronic surveys. (See, for example, Green, 1983, on personality testing via computer, Slack, 1971, on medical history-taking via computer, and Knight et al., 1980, on performance appraisal via computer.) At a minimum, electronic survey results should be calibrated against those obtained through more conventional means. Beyond that, electronic survey results may give us a glimpse into how people behave in a new communication environment.

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The Polls: Medical Care in the United States

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MEDICAL care and government policies toward it have been changing slowly but significantly in the United States. Rapidly rising medical costs—especially cost increases larger than high general inflation during difficult economic times—became the catalyst for change. The Reagan administration's proposals, policies, and budget cuts have altered the course of health policy. Problems of equity and access to health care continue for the poor and uninsured (estimates of the latter ranging from 8 to 15 percent), and the recurring debate about forms of national health insurance may begin anew (cf. Erskine, 1975; Kingdon, 1984). Other related issues which also affect the costs of medical care are starting to become more prominent: the needs of an aging and older population, long-term care, catastrophic care, prevention, the development and use of new technology, and malpractice and the accountability of the medical profession. The public is only beginning to get acquainted with the new ways (and alphabet soup) in which patient care is provided, insured, and paid for—larger insurance premiums, deductibles, and out-of-pocket expenses; and, for example, the uses of preferred provider organizations (PPOs), health maintenance organizations (HMOs), and the new prospective payment cost controls for treatments: the diagnostic-related groups (DRGs) that are currently applied to Medicare and inevitably more broadly.

Where, then, does the public stand? Public concern and support for government assistance in medical care is virtually on par with Social Security as an *entitlement* (cf. Shapiro and Smith, 1985). This support appears to have been strikingly stable for decades, and on the basis of limited data, it seems to be strikingly similar to public attitudes in other affluent Western countries that have more extensive national medicare programs (cf. Coughlin, 1980; Pescosolido et al., 1985). Support for more spending and government action in this policy area has been consistently high in general, especially because of the elderly and the poor, who are perceived to be truly needy. The public appears

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to be motivated by compassion and altruism toward *all* citizens, although some broadly defined private interests cannot be ruled out (cf. Steiber and Ferber, 1981; Shapiro and Smith, 1985).

Overall, the survey data suggest that the changes in health care thus far have not had substantial effect on the public's general satisfaction with health care and medical insurance (but cf. John, 1985). However, in addition to challenging high costs, citizens appear to be more critical, litigious, and scrutinizing than in the past of the behavior of doctors and hospitals. Systematic evidence concerning the consequences of various reforms and policy changes has not yet been examined, but the public, given the medical services that it has come to expect, will tend to oppose drastic changes in access or quality such as rationing (e.g., Aaron and Schwartz, 1984), and abuses or widespread (and highly publicized) errors in judgment that occur in the name of "cost effectiveness" (cf. Bernard, 1985, on uncompensated hospital care and patient "dumping," and recent anti-dumping legislation).

On the other hand, there appears to be an underlying ambivalence that makes the public very receptive to more incremental changes of the sort that occurred in the past with Medicare, Medicaid, federal encouragement or support for HMOs and certain types of special treatments (e.g., renal dialysis), and, currently, prospective payment controls and changes in employer-provided health plans (see Taylor, 1985: 19–20). Such policies along with other credible and persuasive efforts at opinion leadership could move the country closer, with uncertain consequences, to some form of national health insurance (cf. Morone and Dunham, 1985; Sidel and Sidel, 1984; Page et al., 1987).

National health insurance has generally had a good deal of support in principle, but this has not necessarily been support for *governmentally* provided insurance or health services, but rather the desire that the federal government guide private and public efforts to provide and pay for medical care (see Payne, 1946). Americans are ever willing to look to market competition for assistance—particularly a market tending toward a surplus of medical providers—but with typically desirable government regulation in the wings (e.g., Shapiro and Gillroy, 1984).

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CRI — Cambridge Reports, Inc., including Cambridge Reports (1985)

HARRIS — Louis Harris and Associates

HARRIS/KFF — HARRIS for the Kaiser Family Foundation

KPA/AMA — Kane, Parsons, and Associates, Inc., for the American Medical Association

MOR — Market Opinion Research

NBC — National Broadcasting Company

NYT/CBS — *The New York Times*/Columbia Broadcasting System

- NORC — NORC, University of Chicago
 NORC-GSS — NORC's General Social Surveys
 ROPER — Roper Organization
 SRC/CPS — Survey Research Center/Center for Political Studies, University of Michigan, American National Election Studies
 TRENDX — Trendex, Inc./General Electric Quarterly Index of Company Relations. NB: Samples drawn from telephone directories, not RDD
 YSW — Yankelovich, Skelly, and White, Inc.
 YSW/HIAA — YSW for the Health Insurance Association of America

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Support for Government Action and Spending for Medical Care

NORC, Roper: I'm going to read off a number of different things. For each would you tell me whether you think it is a privilege that a person should have to earn, or a right to which he is entitled as a citizen? . . . Adequate medical care.

	NORC 4/1968 ^a	Roper 2/1975	Roper 2/1978
Privilege	14%	21%	19%
Right	86	76	79
Don't know	1	3	2

^a Next, I'd like you to tell me whether you agree strongly, agree somewhat, disagree somewhat, or disagree strongly with each of the following statements. . . . Every person has a right to receive free medical care if he needs it but cannot afford it.

NORC-GSS: In general, some people think that it is the responsibility of the government in Washington to see to it that people have help in paying for doctors and hospital bills. Others think that these matters are not the responsibility of the federal government and that people should take care of these things themselves. Where do you put yourself on this [6-point] scale or haven't you made up your mind on this?

	1975	1983	1984
1. I strongly agree it is the responsibility of government to help	36%	26%	24%
2.	13	19	18
3. I agree with both answers	28	32	34
4.	8	10	12
5. I strongly agree people should take care of themselves	13	10	8
6. DK/NA	2	4	4

ROPER: Turning now to the business of the country—we are faced with many problems in this country, none of which can be solved easily or inexpensively. I'm going to name some of these problems, and for each one I'd like you to tell me whether you think we're spending too much money on it, too little money, or about the right amount. . . . Improving and protecting the nation's health.

	10/71	12/73	12/74	12/75	12/76	12/77	12/78	12/79	12/80	12/81	12/82	12/83
Too much	4%	5%	5%	6%	7%	6%	7%	7%	6%	6%	5%	5%
Too little	55	57%	60%	57%	55%	58	60	59	58	56	56	56
About right	30	32	27	29	31	28	27	29	31	33	35	33
DK/NA	11	7	8	8	6	7	7	5	6	6	4	6

NORC-GSS: We are faced with many problems in this country, none of which can be solved easily or inexpensively. I'm going to name some of these problems, and for each one I'd like you to tell me whether you think we're spending too much money on it, too little money, or about the right amount. . . . Are we spending too much, too little, or about the right amount on . . . improving and protecting the nation's health?

	1973	1974	1975	1976	1977	1978	1980	1982	1983	1984	1985
Too much	5%	5%	5%	5%	7%	7%	8%	6%	5%	7%	6%
About right	31	28	28	31	32	34	34	32	34	31	33
Too little	61	64	62	60	56	55	55	56	57	57	58
DK/NA	4	4	4	4	5	4	4	5	4	5	3

n = 490 *n* = 751

CRI: In 1981, spending for health and health care in the United States totaled about 10% of the country's gross national product, which is the value of all the goods and services produced in the country. Compared to spending on things like food, housing, education, and national defense, do you think spending 10% of the gross national product on health care is too much, too little, or about the right amount?

	1982	1983	1984	1985 ^a
Too much	28%	16%	19%	28%
Right amount	35	27	32	30
Too little	23	43	35	26
Don't know	14	14	14	16

^a In 1985 spending . . . totaled about 11%. . . . Do you think spending 11%. . . .

TRENDEX: I would like to get your opinion on several areas of important government activities. As I read each one, please tell me if you would like to see the government do more, do less or do about the same amount as they have been on . . . Health measures.

	1/65 ^a	1/66 ^a	1/68	4/68	10/68	1/69	7/69	4/70	7/70	4/71
Do more	67%	59%	61%	72%	73%	68%	74%	78%	79%	78%
Do less	9	9	8	7	5	5	5	4	4	3
Do the same	23	31	29	19	20	26	19	16	15	16
DK/NA	1	—*	1	1	2	1	2	2	1	2
	10/71	4/72	7/72	10/72	1/73	7/73	1/74	7/74	10/74	1/75
Do more	82%	80%	81%	82%	74%	84%	76%	82%	76%	73%
Do less	3	4	4	3	7	3	4	4	6	7
Do the same	13	14	13	13	19	12	18	13	17	19
DK/NA	2	1	2	1	6	1	2	1	1	2
	4/75	7/75	10/75	4/76	7/76	10/76	1/77	4/77	7/77	10/77
Do more	73%	76%	70%	72%	75%	71%	70%	70%	73%	71%
Do less	7	7	11	9	8	10	8	10	8	9
Do the same	18	16	18	17	15	18	20	18	18	18
DK/NA	1	1	2	2	2	1	2	1	1	2
	1/78	4/78	10/78	1/79	4/79	7/79	10/79	1/80	4/80	7/80
Do more	69%	71%	69%	67%	70%	70%	70%	63%	65%	67%
Do less	10	11	11	14	10	9	11	14	13	11
Do the same	19	17	18	18	18	20	18	21	21	21
DK/NA	3	2	1	1	1	1	1	2	1	—*
	10/80	1/81	4/81	7/81	10/81	1/82	4/82	7/82	10/82	
Do more	66%	60%	61%	66%	66%	60%	64%	70%	69%	
Do less	12	14	13	8	10	13	8	9	10	
Do the same	20	25	24	20	23	25	27	20	20	
DK/NA	1	1	1	2	1	2	1	1	1	

* Less than one 0.5 percent.

^a I would like to get your opinion on several areas of important expenditures, first, on the part of the government. As I read each one, please tell me if you would like to see the government spend more, spend less or spend about the same amount as they have been on . . . health measures.

TRENDEX: I would like to get your opinion on several areas of important government activities. As I read each one, please tell me if you would like the government to do more, do less, or about the same as they have been . . . on health measures. I notice you said you would like the government to do more on (health measures). Would you favor this increased activity if it required an increase in taxes?

	4/72	4/72	10/78	4/79	4/81	4/82
Yes	61%	61%	69%	65%	62%	65%
No	30	29	26	26	29	28
DK/NA	9	11	6	9	8	6
	n = 872	n = 716	n = 708	n = 714	n = 633	n = 643

CRI: In the next two decades there will be a big increase in the number of older people in our society. Would you be willing to have your taxes increased to provide long-term care in nursing homes for those elderly people who need it, or not?

	1981	1982	1983	1985
Yes	49%	53%	43%	58%
No	31	27	32	25
Not sure	20	20	24	17

National Health Insurance and Health Care Reform

NBC: Do you favor or oppose a national program of health insurance giving medical and hospital care to everyone, with the government paying part of the cost?

	8/78	11/78	7/79
Favor	64%	61%	61%
Oppose	31	33	31
Not sure	5	6	7

SRC/CPS, MOR: There is much concern about rapid rise in medical and hospital costs. Some feel there should be a government health insurance plan which would cover all medical and hospital expenses. Others feel that medical expenses should be paid by individuals and through private insurance like Blue Cross. Where would you place yourself on this scale, or haven't you thought much about this?

	SRC/CPS		MOR		SRC/CPS		MOR		SRC/CPS	
	1970	1972 ^a	1974	1976	1976 ^a	1978 ^a	1979	1984 ^b		
1. Government insurance plan	29%	31%	32%	30%	28%	28%	24%	16%		
2.	9	7	10	9	9	10	9	10		
3.	8	8	7	9	7	8	9	11		
4.	15	14	15	17	12	13	18	20		
5.	6	7	7	9	9	9	10	16		
6.	10	6	7	7	10	10	11	14		
7. Private insurance plan	24	28	21	20	25	22	20	12		

^a Omits "health."

^b Omits "health." . . . Blue Cross or other company-paid plans.

NYT/CBS: Do you favor or oppose . . . national health insurance, financed by tax money, and paying for most forms of health care?

	8-9/76 ^a	7/77 ^b	2/80	3/80	4/81 ^c
Favor	49%	60%	50%	46%	52%
Oppose	39	33	41	43	37
No opinion	9	7	9	11	11

^a Do you favor or oppose a national program of health insurance with the government paying the cost?

^b Now, we'd like to ask you about some of the things the government does with our taxes. Do you approve or disapprove . . . of a national health care program for all people—with taxes paying the cost?

^c Do you favor or oppose national health insurance, which would be financed by tax money, paying for most forms of health care?

ROPER: There are differing opinions as to how health care insurance should be provided. Some people favor the present system of private insurance and health plans. Others say we should have a national system of health insurance provided through the government and paid for like Social Security now is. Which do you favor—our present system of private health plans, or a national health insurance plan provided through the government?

	9/73	2/74	2/75	9/75	10/76	9/77	9/78	2/79	9/83
Present private plan	50%	43%	40%	50%	52%	45%	50%	40%	49%
National plan	40	45	46	41	39	47	40	44	41
Don't know	10	12	14	9	10	9	10	15	10

ROPER: There are many problems facing our nation today. But at certain times some things are more important than others, and need more attention from our Federal government than others. I'd like to know for each of the things on this list whether you think it is something the government should be making a *major* effort on now, or something the government should be making *some* effort on now, or something not needing any particular government effort now . . . Government effort to set up a national health insurance system.

	6/79	6/80	6/81	6/82	6/83	6/84
Major effort	50%	41%	45%	44%	50%	53%
Some effort	26	31	28	30	28	27
Needs no effort	18	23	21	21	18	15
Don't know	6	5	5	6	4	4

YSW/HIAA: Attitudes toward national health insurance with tax increase.

	1978	1979	1980	1982
Favor strongly	16%	21%	19%	16%
Favor somewhat	21	17	22	18
Probably favor	28	20	22	25
Probably oppose	14	15	14	15
Oppose somewhat	9	11	9	10
Oppose strongly	11	17	15	16
DK/NA	1	—	—	—

YSW/HIAA: Private health insurance companies give better service to the people they insure than a government health insurance program would.

	1977	1979	1980	1982
Agree	33%	34%	33%	29%
No strong opinion	46	43	46	50
Disagree	18	20	20	18

YSW/HIAA: The competition among the various health insurance companies leads to benefits for the consumer that would not be available through a government-run health insurance program.

	1977	1979	1980	1982
Agree	37%	30%	30%	30%
No strong opinion	45	48	50	50
Disagree	16	19	19	17

YSW/HIAA: National health insurance: Catastrophic vs. Comprehensive

	1979	1980	1982
No new government health care program should be enacted.	25%	21%	25%
A new government health care program should be enacted that would cover people only for those medical expenses that could ruin them financially.	33	42	37
A new government health care program should be enacted that would cover almost all the health care cost people have.	39	35	37

HARRIS/KFF: Which of the following statements comes closest in expressing your overall view on the American health care system?

	1982	1983	1984
On the whole, the health care system works pretty well, only minor changes are necessary to make it work better.	19%	21%	26%
There are some good things in our health care system, but fundamental changes are needed to make it work better.	47	50	49
The American health care system has so much wrong with it that we need to completely rebuild it.	28	25	21

Government Regulation

KPA: If there were less government regulation of health care, in your opinion, what would probably happen to the quality of health care?

	1979	1981
Improve a great deal	5%	3%
Improve somewhat	13	19
No change	25	20
Decline a great deal	11	10
Decline somewhat	29	33
DK	17	15

KPA/AMA: Government regulation of health care has some good effects and some bad effects. Do you feel that the good outweighs the bad, or do you feel that the bad outweighs the good?

	1979	1981
Good outweighs bad	51%	50%
Bad outweighs good	25	29
DK	24	21

CRI: For each specific industry I mention, please tell me whether you think there is now too much or too little government regulation . . . Health care industry.

	1982	1983	1985
Too much	17%	19%	22%
Right amount	19	16	18
Too little	53	54	49
DK	12	12	12

Medical Care Costs

ROPER: How do you feel about the cost of the medical care you receive—do you feel the cost is very reasonable, fairly reasonable, somewhat unreasonable, or very unreasonable?

	10/73	10/75	10/76	10/78
Very reasonable	12%	13%	12%	10%
Fairly reasonable	30	28	32	28
Somewhat unreasonable	28	30	27	28
Very unreasonable	27	26	27	31
DK	3	3	2	3

YSW/HIAA: The price of health insurance is getting too high for the average family to afford.

	1977	1978	1979	1982
Agree	67%	70%	72%	71%
No strong opinion	24	21	20	23
Disagree	8	8	7	5

KPA/AMA: Now thinking about everything that has to do with health care, medicine, and doctors, what do you feel is the main problem facing health care and medicine in the United States today?

	1981	1982	1983	1984
Cost	55%	62%	65%	68%
Quality	14	13	14	12
Access	6	8	6	5
Other	25	17	15	15

SRC/CPS, NYT/CBS: The government ought to help people to get doctors and hospital care at low cost.

	SRC/CPS 1960 ^a	SRC/CPS 1962 ^b	NYT/CBS 1978
Agree	75%	72%	85%
Disagree	25	18	15

^a The government ought to help people get doctors and hospital care at low cost. Agree strongly, agree but not very strongly . . . disagree but not very strongly, disagree strongly.

^b The government ought to help people get doctors and hospital care at low cost. Do you have an opinion on this or not. (If yes) Do you agree the government should do this or do you think the government should not do it. Yes, Yes—qualified, for the aged (Medicare) or for those financially unable. No, no—qualified, except for aged (Medicare).

CRI: I'm going to read you some particular measures that have been proposed to help control health care costs. I'd like you to tell me whether you would strongly favor, somewhat favor, somewhat oppose, or strongly oppose each one. . . . Government price controls and regulations on what doctors and hospitals can charge.

	1979	1981	1982	1984
Strongly favor	38%	36%	41%	50%
Somewhat favor	30	25	26	27
Somewhat oppose	15	14	13	9
Strongly oppose	12	19	16	10
DK	4	6	4	4

. . . Closing inefficient hospitals or merging them into more efficient units when they are in the same vicinity.

	1979	1981	1982	1984
Strongly favor	56%	48%	52%	51%
Somewhat favor	29	26	28	27
Somewhat oppose	7	9	7	9
Strongly oppose	3	8	7	5
DK	5	8	7	8

. . . Giving insurance companies more power to negotiate fees with doctors and hospitals.

	1979	1981	1982	1984
Strongly favor	33%	28%	33%	35%
Somewhat favor	33	29	30	30
Somewhat oppose	12	12	10	11
Strongly oppose	12	18	16	12
DK	10	13	10	11

. . . Stimulating competition among hospitals and doctors by encouraging consumers to compare costs and shop around for medical care.

	1981	1982
Strongly favor	43%	49%
Somewhat favor	31	30
Somewhat oppose	9	7
Strongly oppose	10	8
DK	7	6

Attitudes Toward Health Industry

ROPER: Thinking of all your medical care needs, not just your family doctor, generally speaking, how satisfied would you say you are with the *quality* of the medical care you get—very satisfied, fairly well satisfied, not too satisfied, or not at all satisfied?

	10/73	10/75	10/76	9/78	9/83
Very satisfied	49%	54%	51%	45%	48%
Fairly well satisfied	34	33	34	38	35
Not too satisfied	12	8	9	10	9
Not at all satisfied	4	4	4	5	5
DK/NA	1	2	2	2	2

ROPER: And how satisfied are you with the availability of medical care when you need it—very satisfied, fairly well satisfied, not too satisfied, or not at all satisfied?

	10/73	10/75	10/76	9/78	9/83
Very satisfied	47%	52%	46%	46%	51%
Fairly well satisfied	28	29	32	36	33
Not too satisfied	15	9	11	10	8
Not at all satisfied	6	5	7	5	5
DK/NA	4	5	4	3	3

CRI: Now, I'm going to read you a list of various institutions or types of industries. After each one, I'd like you to tell me whether you have a very favorable, somewhat favorable, somewhat unfavorable, or very unfavorable opinion of these industries . . . The health care industry, including doctors and hospitals.

	1979	1980	1981	1982	1983	1984
Very favorable	9%	14%	14%	25%	14%	19%
Favorable	37	38	41	34	39	40
Unfavorable	30	25	25	21	24	24
Very unfavorable	21	21	17	18	20	15
DK	3	3	3	2	2	2

KPA/AMA: Please tell me if you agree with each of the following statements about doctors.

	(Percentage Agree)		
	1982	1983	1984
Most physicians are accessible in an emergency	NA	56%	53%
Most physicians are available for routine health care problems	NA	69	NA
Doctors are usually up to date on the latest advances in medicine	71	72	71
Most doctors are genuinely dedicated to helping people	80	76	NA
Most doctors take a genuine interest in their patients	68	62	62
Doctors act like they're better than other people	33	35	38
Doctors fees are usually reasonable	42	32	27
Doctors are too interested in making money	60	66	67
Doctors are active in trying to hold down the cost of medical care	NA	22	21
Most doctors spend enough time with their patients	46	38	NA

	(Percentage Agree)		
	1982	1983	1984
Doctors usually explain things well to their patients	55	49	44
Poor people are able to get needed medical care	48	41	43
The elderly are able to get needed medical care	52	50	45
People are beginning to lose faith in doctors	62	66	68

YSW/HIAA: Degree of satisfaction with present health insurance coverage.

	1975	1976	1977	1978	1982
Very satisfied	44%	42%	46%	40%	40%
Somewhat satisfied	36	37	36	36	41
Somewhat dissatisfied	9	11	9	13	8
Very dissatisfied	7	7	6	7	5
DK/NA	4	3	3	4	6

Correction

In "The Polls: Environmental Protection" (*POQ* 50 (2):273) the following figures are the correct ones: NORC-GSS, 1985, Too much: 8%, Dk: 4%; Roper, 1983, Too far: 14%.